

HYDROGEOLOGIC CORRELATIONS FOR SELECTED WELLS ON

LONG ISLAND, NEW YORK--

A data base with retrieval program

by H. T. Buxton, D. A. Smolensky, and P. K. Shernoff

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DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., Secretary

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information
write to:

U.S. Geological Survey
5 Aerial Way
Syosset, New York 11791
(516) 938-8830

Copies of this report may be
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CONVERSION FACTORS AND ABBREVIATIONS

For the convenience of readers who prefer metric (International System) units to the inch-pound units in this report, the following conversion factors may be used:

<u>Multiply inch-pound units</u>	<u>by</u>	<u>To obtain metric units</u>
<u>Length</u>		
inch (in)	25.40	millimeter (mm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
<u>Flow</u>		
gallon per minute (gal/min)	0.06308	liter per second (L/s)

National Geodetic Vertical Datum of 1929 (NGVD of 1929)

A geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "mean sea level."

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ABSTRACT

Accurate delineation of Long Island's internal hydrogeologic structure is integral to the understanding and management of the ground-water system. The irregular extent and surface configuration of Long Island's seven major hydrogeologic units give the ground-water system a complex internal structure. This report presents a computerized data base of hydrogeologic correlations for 3,146 wells on Long Island and adjacent parts of New York City. The data base includes the well-identification number, the latitude and longitude of the well location, the altitude of land surface at the well, the altitude of the bottom of the drilled hole, and the altitude of the upper surface of the major hydrogeologic units penetrated by the well. A computer program is included that allows retrievals of selected types of data for all or any local area of Long Island. These data retrievals are a valuable aid to the construction of hydrogeologic-surface maps.

INTRODUCTION

Long Island extends approximately 120 mi eastward from the East River and New York Harbor to Montauk Point (fig. 1). It contains the densely populated boroughs of New York City (Kings and Queens Counties) in the west, suburban Nassau and western Suffolk Counties in the central part, and areas of farmlands and pine barrens in the east.

Ground water is the sole source of freshwater supply for the 2.6 million inhabitants of Nassau and Suffolk Counties. About 500 Mgal/d was pumped from the Island's ground-water reservoir in 1981 for public supply, commercial, and agricultural needs. This demand is expected to increase in coming years, which will make proper resource management imperative.

Long Island's geologic history has consisted of alternating periods of erosion and deposition. The result is a sequence of aquifers and confining units of irregular extent and surface configuration that give the ground-water system a complex internal structure. This irregular internal geometry has a large influence on the patterns and rates of ground-water flow. Ground-water flow is retarded where the aquifers are separated by a confining unit but is unimpeded where the intervening confining unit has been eroded or where cut-and-fill deposition makes two aquifers laterally contiguous.

Knowledge of the internal hydrogeologic structure is necessary for efficient resource management, which includes (1) designing future water-development plans; (2) selecting sites for waste disposal; (3) locating and tracking the movement of contaminants within the ground-water system; and (4) mitigating other undesirable effects of man's influence on the system, such as streamflow depletion and saltwater intrusion.

Purpose and Scope

This report presents a computerized data base of hydrogeologic-unit correlations for 3,146 wells on Long Island and adjacent parts of New York City. The data base (at end of report) gives the altitude at which the upper surface of each of seven major hydrogeologic units was penetrated and also includes the location, land-surface altitude, and depth of each well.

The following sections discuss the hydrogeologic units and the well data used to correlate surface altitudes for each unit; they also describe the format of the data base and explain each element. Also included is a description of a simple system of data retrieval that facilitates construction of hydrogeologic maps with a computer program.

A report by Smolensky and others (in press) presents a set of maps showing the configuration of the upper surface of these hydrogeologic units. The correlations presented herein were developed during construction of those maps and are consistent with their representation of the system geometry. The data-retrieval methods described in this report were used during map construction.

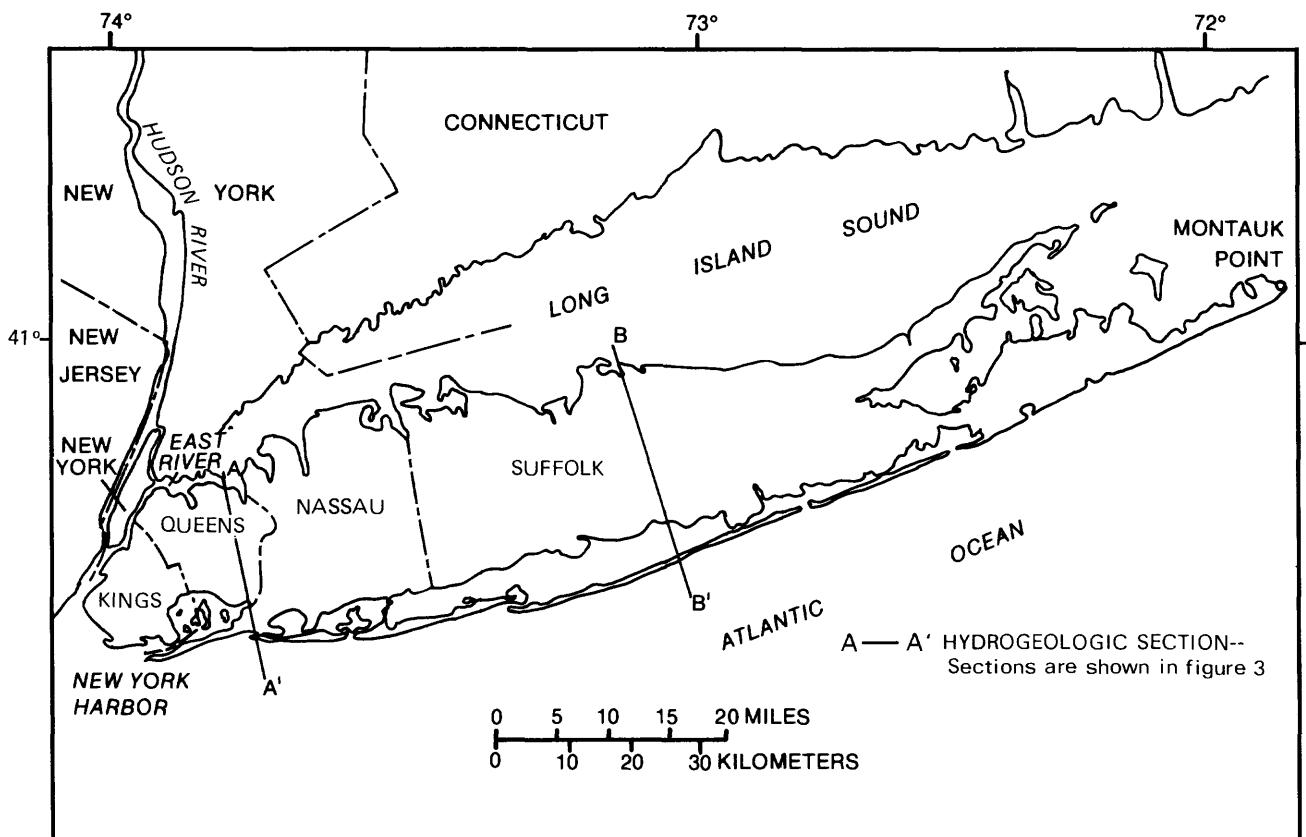


Figure 1.--Location of Long Island, N.Y., and of hydrogeologic sections depicted in figure 3.

Previous Investigations

Some previous hydrogeologic investigations that were completed on a local scale were used as a starting point for this study. Krulikas (1981) and Jensen and Soren (1971) evaluated the hydrogeology of Suffolk County, Kilburn (1980) and Kilburn and Krulikas (1986) evaluated the hydrogeology of parts of Nassau County, and Buxton and others (1981) evaluated the hydrogeology of Kings and Queens Counties.

Acknowledgments

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HYDROGEOLOGIC FRAMEWORK

Long Island is underlain by unconsolidated deposits of clay, silt, sand, and gravel that overlie southward-dipping consolidated bedrock (fig. 2). The unconsolidated deposits are thinnest in northern Queens County (northwestern Long Island) and thicken to the south and east to a maximum thickness of 2,000 ft at the south shore. These deposits contain several distinct geologic units ranging in age from Late Cretaceous through Pleistocene, with some recent deposits near shores and along streams. These units are differentiated by age, method of deposition, and lithology in table 1.

In studies of ground-water availability and flow patterns, correlations that are based strictly on geologic factors may not adequately describe the internal structure of the hydrologic system; generally an interpretation in which the units are differentiated on the basis of water-transmitting properties is more useful. Thus, table 1 gives both the geologic units and the corresponding hydrogeologic units and shows their stratigraphic relationships. Eight major hydrogeologic units are indicated; these are, in order of deposition, consolidated bedrock, the Lloyd aquifer, the Raritan confining unit, the Magothy aquifer, the Monmouth greensand, the Jameco aquifer, the Gardiners Clay, and the upper glacial aquifer. The two hydrogeologic vertical sections shown in figure 3 depict the relative position of these units in western and eastern Long Island, respectively. The Jameco aquifer is present only in western Long Island (fig. 3A), and the Monmouth greensand is present only in eastern Long Island (fig. 3B). A map showing the extent and configuration of all units below the upper glacial aquifer is given in Smolensky and others (in press). Other local hydrogeologic units have been identified within the upper glacial deposits but are not discussed herein.

Table 1. --Hydrogeologic units of Long Island and their water-bearing properties.

System	Series	Geologic unit	Hydro-geologic unit	Approximate maximum thickness (ft)	Character of deposits	Water-bearing properties
	Holocene	Recent deposits: Salt marsh deposits, stream alluvium, shoreline deposits, and fill.	Recent deposits	50	Sand, gravel, clay, silt, organic mud, peat, loam, and shells. Colors are gray, brown, green, black, and yellow.	Beach deposits are highly permeable; marsh deposits poorly permeable. Locally hydraulically connected to underlying aquifers.
					Till composed of clay, sand, gravel, and boulders, forms Harbor Hill and Ronkonkoma terminal moraines. Outwash deposits consist of quartzose sand, fine to very coarse, and gravel, pebble to boulder sized. Also contains lacustrine, marine, and reworked deposits. Local units are Port Washington aquifer and confining unit, "20-foot clay," and clay at Smithtown.	Till is poorly permeable. Outwash deposits are moderately to highly permeable. Glaciolacustrine and marine clay deposits are mostly poorly permeable but locally have thin, moderately permeable layers of sand and gravel. Average horizontal hydraulic conductivity is approximately 270 ft/d; conductivity of morainal material is approximately 50 percent of outwash deposits; anisotropy is approximately 10:1.
		Upper Pleistocene deposits	Upper glacial aquifer	700		
		unconformity?	Gardiners Clay	150	Clay, silt, and few layers of sand. Colors are grayish green and brown. Contains marine shells and glauconite.	Poorly permeable; constitutes a confining layer for underlying aquifer. Some sand lenses may be permeable. Average vertical hydraulic conductivity is approximately 0.001 ft/d.
		Quaternary	Jameco Gravel aquifer	200	Sand, fine to very coarse, and gravel to large-pebble size; few layers of clay and silt. Gravel is composed of crystalline and sedimentary rocks. Color is mostly brown.	Moderately to highly permeable. Confined by overlying Gardiners Clay. Average horizontal hydraulic conductivity is 200 to 300 ft/d; anisotropy is approximately 10:1.
		Pleistocene				

				Precambrian and Paleozoic
unconformity	Monmouth Group	Monmouth Greensand	200	Interbedded marine deposits of clay, silt, and sand, dark-greenish gray, greenish-black, greenish, dark-gray, and black, containing much glauconite.
unconformity	Matawan Group-Magothy Formation, undifferentiated	Magothy aquifer	1,100	Sand, fine to medium, clayey in part; interbedded with lenses and layers of coarse sand and sandy and solid clay. Gravel is common in basal zone. Sand and gravel are quartzose. Lignite, pyrite, and iron oxide concretions are common. Colors are gray, white, red, brown, and yellow.
unconformity	Unnamed clay member	Raritan confining unit	200	Clay, solid and silty; few lenses and layers of sand. Lignite and pyrite are common. Colors are gray, red, and white, commonly variegated.
unconformity	Raritan Formation Lloyd Sand Member	Lloyd aquifer	500	Sand, fine to coarse, and gravel, commonly with clayey matrix; some lenses and layers of solid and silty clay; locally contains thin lignite layers. Sand and most of gravel are quartzose. Colors are yellow, gray, and white; clay is red locally.
		Bedrock	- -	Crystalline metamorphic and igneous rocks; muscovite-biotite schist, gneiss, and granite. A soft, clayey zone of weathered bedrock locally is more than 70 ft thick.
Upper Cretaceous				
				Cretaceous

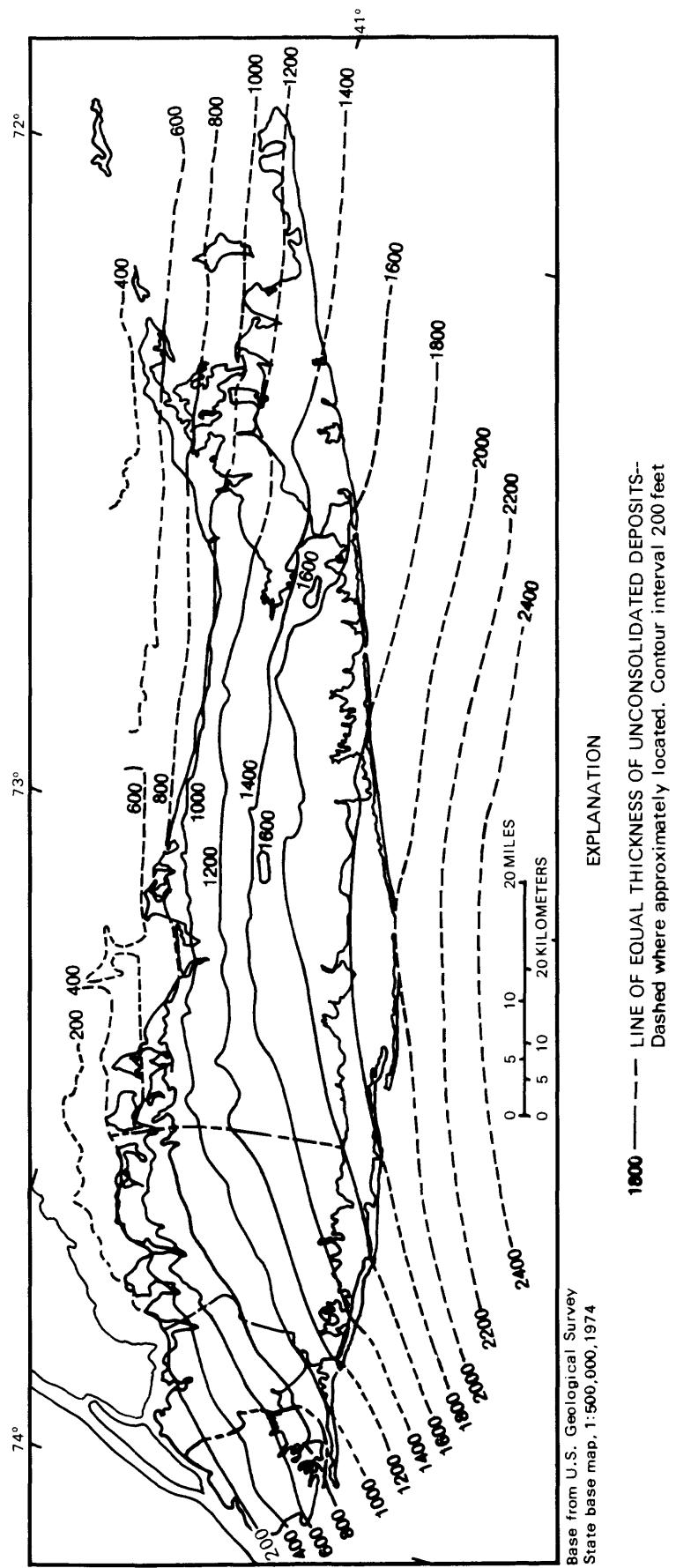


Figure 2. --Thickness of unconsolidated deposits on Long Island.

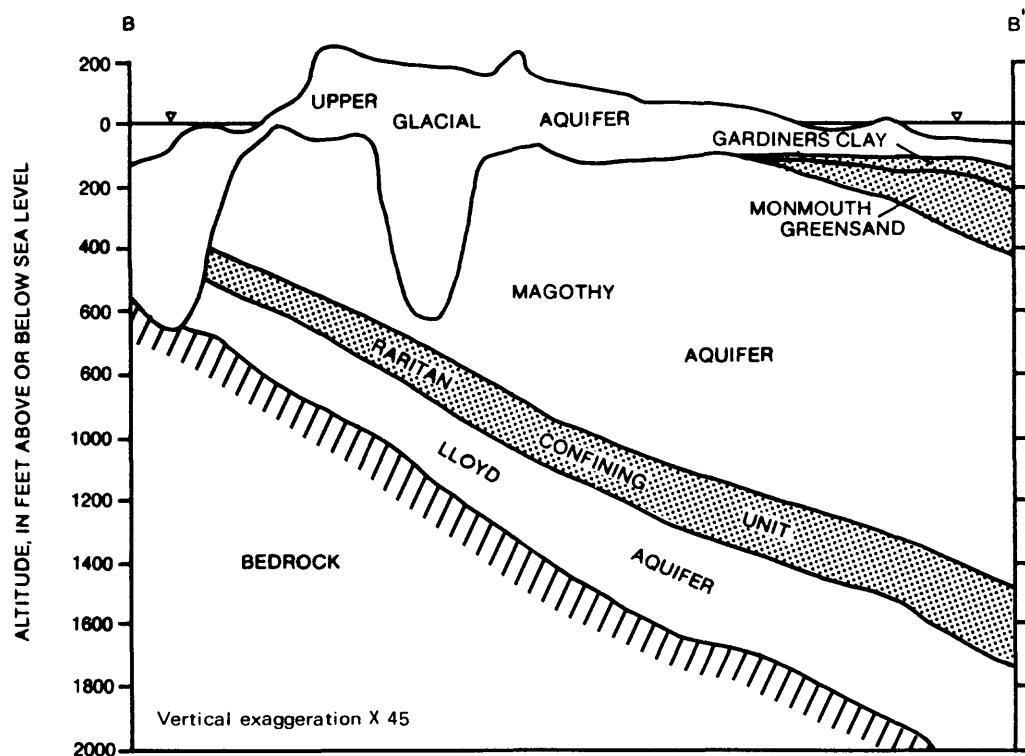
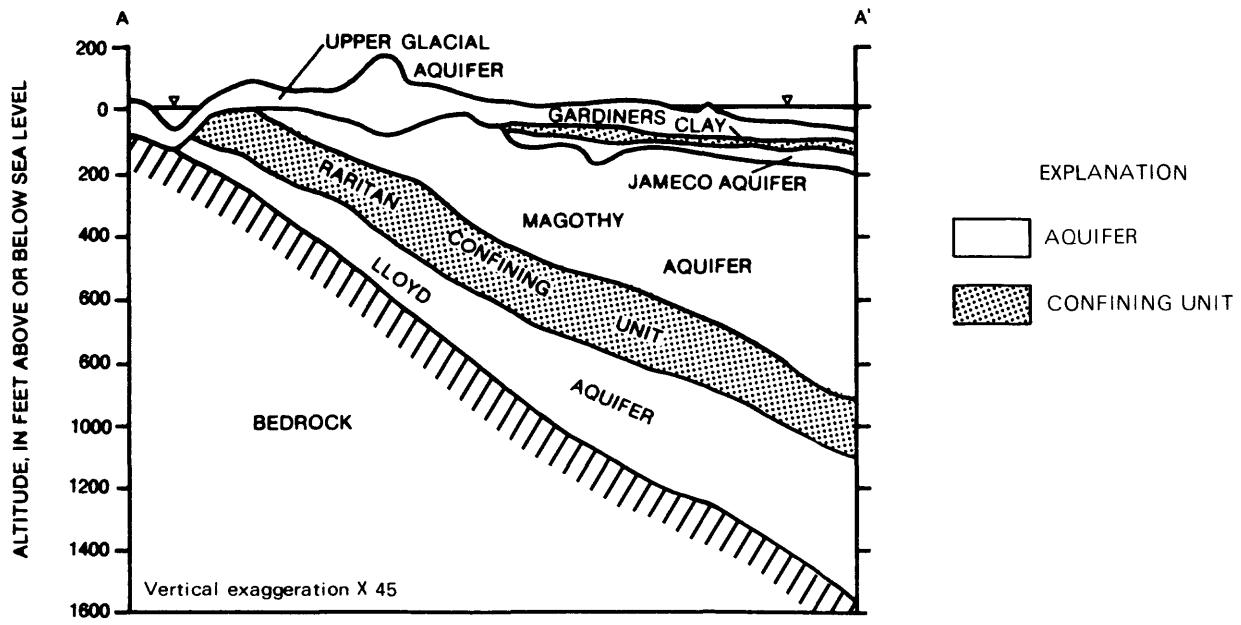


Figure 9.--Generalized vertical sections showing major hydrogeologic units:
 A. On western Long Island. B. On eastern Long Island.
 (Locations are shown in fig. 1.)

CRITERIA FOR HYDROGEOLOGIC INTERPRETATION OF WELL DATA

Hydrogeologic well data included geophysical logs and drillers' and geologists' descriptions of cores and other drilling samples. Lithologic, mineralogic, and paleontologic evidence from these sources was used in conjunction with a conceptual sedimentation model of the succession of physical environments through Long Island's geologic past to define the altitude of the upper surface of each major hydrogeologic unit penetrated by a well. Offshore seismic-reflection data (Grim and others, 1970, and Deborah Hutchinson, U.S. Geological Survey, written commun., 1984) were also considered. The surface altitudes of a unit at all wells were correlated to form a surface consistent with Long Island's geologic history.

ELEMENTS OF DATA BASE

Hydrogeologic well data from 3,146 wells throughout Long Island are given in the data base at the end of this report. These include 1,559 wells in Suffolk County, 830 wells in Nassau County, 462 wells in Queens County, 264 wells in Kings County, and 30 wells in the adjacent parts of New York City. The locations of wells in Kings, Queens, and Nassau Counties and adjacent areas are shown on plate 1; those in western Suffolk County on plate 2; and those in eastern Suffolk County on plate 3. All elements of the data base are explained in the following sections.

Well Identification

The State of New York requires that Long Island wells that pump more than 45 gal/min have a permit from the New York State Department of Environmental Conservation (NYSDEC). In the permit process, the well owner files an installation report with basic well data with NYSDEC, who assigns a well number. Other wells that are installed as geologic test holes or for collection of other forms of hydrologic data are reported voluntarily and filed.

The prefix letter of the well indicates the county in which the well is located, as follows: K, Kings; Q, Queens; R, Richmond (Staten Island); B, Bronx; M, New York (Manhattan); N, Nassau; and S, Suffolk. Wells are assigned numbers chronologically as they are reported.

Well Location

Each well has been plotted on U.S. Geological Survey 24-minute topographic maps, and the latitude and longitude estimated to the nearest second. A 5-second latitude-longitude grid is included on plates 1 through 3 to facilitate well location.

Well Altitudes

The altitude of land surface and of the bottom of the borehole is given in feet above or below (-) sea level. Many boreholes are significantly deeper than the completed well, and commonly the hydrogeologic information from the backfilled part of the hole is of value in that it indicates the presence or absence of a hydrogeologic unit at that depth.

Hydrogeologic Unit Penetrated and Altitude of Upper Surface

The altitude of the upper surface of any of the seven major hydrogeologic units penetrated by a well is given in feet above or below sea level.

Altitudes facilitate correlation of these horizons among adjacent wells. In areas where the hydrogeologic unit is believed present but its exact surface altitude is difficult to identify, the term PRES (present) is entered. Where the unit is believed present but no drillers' log or other geologic information is available, the term NOREC (no record) is entered.

Adjacent Wells

Many wells are drilled in or near the same location; they may be clustered for site-specific projects or may be one of several grouped together in a well field. Only the most recent well at a location is labeled on plates 1 through 3; adjacent wells are included in the data base.

SELECTIVE DATA RETRIEVAL

Selective retrieval of information on individual hydrogeologic units is useful in defining the configuration and extent of a unit and its relationship to contiguous units. This section briefly describes a simple algorithm (and FORTRAN program, table 2) that retrieves selected information from the data base and prepares it in a form compatible with software available for plotting maps of Long Island (G. W. Hawkins, U.S. Geological Survey, written commun., 1984).

Program Documentation

A user can select pertinent information from nine fields in the data base. These nine fields along with a blank field are:

<u>Field</u>	<u>Information</u>
1	Well number
2	Altitude of hole bottom
3	Altitude of upper surface of Gardiners Clay
4	Altitude of upper surface of Jameco aquifer
5	Altitude of upper surface of Monmouth Greensand
6	Altitude of upper surface of Magothy aquifer
7	Altitude of upper surface of Raritan confining unit
8	Altitude of upper surface of Lloyd aquifer
9	Altitude of upper surface of consolidated bedrock
10	Blank field

The algorithm retrieves information from the selected field(s) and creates a file of labels. The file includes the latitude and longitude of the well for location, the symbol used for plotting the well on a map of Long Island, and the desired label to be plotted at each symbol (labels are selected from the above fields).

Table 2.--FORTRAN computer program for select

```

CHARACTER*6 NF(10),NA,NB,NC,NL
CHARACTER*1 NS,TEXTIN,NN
PRINT*, *****
PRINT*, *** PROGRAM - HYDROGEOLOGY RETRIEVE(HGR.F77) ***
PRINT*, *** GENERATES A LABEL FILE (FOR MLIPLOT) ***
PRINT*, *** FROM THE HYDROGEOLOGY DATA BASE. ***
PRINT*, ****
PRINT*, ***ENTER NAME OF HYDROGEOLOGY FILE'
CALL IFILE(15)
PRINT*, ***ENTER NAME OF LABEL CARDS FILE'
CALL OFILE(4,16)

C
PRINT*, ****
NCHOP=INTIN(' ***ENTER 0 FOR ISLAND-WIDE RETRIEVAL, 1 FOR LOCAL')
IF(NCHOP.EQ.0) GO TO 20
LNLAT=INTIN(' ***ENTER LAT OF NORTHERN EXTENT OF LOCAL AREA***')
LSLAT=INTIN(' ***ENTER LAT OF SOUTHERN EXTENT OF LOCAL AREA***')
LELONG=INTIN(' ***ENTER LONG OF EASTERN EXTENT OF LOCAL AREA***')
LWLONG=INTIN(' ***ENTER LONG OF WESTERN EXTENT OF LOCAL AREA***')
20 CONTINUE
C
PRINT*, ****
PRINT*, *** THE DATA BASE HAS THE FOLLOWING ***
PRINT*, *** INFORMATION IN THE NOTED NUMBERED FIELDS. ***
PRINT*, ****
PRINT*, *** - 1- WELL NUMBERS ***
PRINT*, *** - 2- ALTITUDE OF HOLE BOTTOM ***
PRINT*, *** - 3- ALT. OF GARDINERS CLAY ***
PRINT*, *** - 4- ALT. OF JAMECO GRAVEL ***
PRINT*, *** - 5- ALT. OF MONMOUTH GREENSAND ***
PRINT*, *** - 6- ALT. OF MAGOTHY AQUIFER ***
PRINT*, *** - 7- ALT. OF RARITAN CONFINING UNIT ***
PRINT*, *** - 8- ALT. OF LLOYD AQUIFER ***
PRINT*, *** - 9- ALT. OF BEDROCK ***
PRINT*, *** -10- BLANK FIELD(NO LABEL IN OPTIONS) ***
PRINT*, ****
NN=TEXTIN('ENTER C TO CONTINUE')
PRINT*, ****
PRINT*, *** THREE OPTIONS ARE AVAILABLE ***
PRINT*, *** -----
PRINT*, *** 1- LABEL WITH FIELD A IF:
PRINT*, *** FIELD B IS NOT BLANK. ***
PRINT*, *** 2- LABEL WITH FIELD A IF:
PRINT*, *** FIELD B IS BLANK ***
PRINT*, *** 3- LABEL WITH FIELD A IF:
PRINT*, *** FIELD B IS BLANK, AND ***
PRINT*, *** FIELD C IS NOT BLANK. ***
NN=TEXTIN('ENTER C TO CONTINUE')
PRINT*, ****
PRINT*, *** '
NOP=INTIN(' *** ENTER OPTION( 1,2 OR 3)***')

```

trieval of hydrogeologic data.

```
PRINT*,*** '
NS=TEXTIN(' ***ENTER SYMBOL FOR WELL POINT ***')
PRINT*,*** ,
C
NF(10)=      ,
IA=INTIN(' ***ENTER FIELD FOR A ***')
IB=INTIN(' ***ENTER FIELD FOR B ***')
IF(NOP.NE.3) GO TO 15
IC=INTIN(' ***ENTER FIELD FOR C ***')
C
15 PRINT*,*****YOU HAVE THE OPTION TO HAVE THE INFO IN ***,
PRINT*,***   ONE OF THE FIELDS ADDED TO THE END OF ***,
PRINT*,***   THE LABEL CARDS FOR REFERENCE. ***,
IL=INTIN(' ***      ENTER FIELD # FOR EXTRA LABEL***')
C
C READ DATA FOR A WELL
C
10 READ(15,8,END=99)NF(1),LAT,LONG,(NF(I),I=2,9)
8 FORMAT(A6,3X,I6,1X,I6,7X,A6,3X,A6,1X,A6,
/     1X,A6,1X,A6,1X,A6,1X,A6)
C
IF(NCHOP.EQ.0)GO TO 25
IF(LAT.GT.LNLAT.OR.LAT.LT.LSLAT) GO TO 10
IF(LONG.GT.LWLONG.OR.LONG.LT.LELONG) GO TO 10
25 CONTINUE
C
C DEFINE FIELDS A,B,C AND L
C
NA=NF(IA)
NB=NF(IB)
IF(NOP.NE.3) GO TO 140
NC=NF(IC)
C
140 CONTINUE
NL=NF(IL)
C
GO TO (50,60,70),NOP
50 IF(NB.NE.' ') GO TO 5
GO TO 10
60 IF(NB.EQ.' ') GO TO 5
GO TO 10
70 IF(NB.EQ.' '.AND.NC.NE.' ') GO TO 5
GO TO 10
C
5 WRITE(16,9)NS,LAT,LONG,NA,NL
9 FORMAT('L 0 ',A1,20X,I6,1X,I6,4X,A6,30X,A6)
GO TO 10
99 CONTINUE
STOP
END
```

One of three options can be selected:

- (1) Label with field A if field B is not blank,
- (2) Label with field A if field B is blank,
- (3) Label with field A if field B is blank, and field C is not blank,

where A, B, and C are defined to be one of the ten fields listed on page 9. Data can be retrieved on an islandwide scale or for a local area by defining limiting latitudes and longitudes.

Sample Retrievals

The options provided by this program enable the user to retrieve selected data and plot maps that are useful in defining hydrogeologic geometry, either on an islandwide or a local scale. Several examples of data retrievals are outlined below; an application to construct a hydrogeologic surface map is presented also.

Example 1.--Select option 1; designate field A equal to 1 (well number) and field B equal to 6 (altitude of the upper surface of the Magothy aquifer).

A file is prepared for use in plotting a map that shows the locations and well numbers of all wells that penetrate the Magothy aquifer. (If field A were designated equal to 6, the map would show the surface altitude of the Magothy aquifer at each well).

Example 2.--Select option 3; designate field A equal to 10, field B equal to 3, and field C equal to 6.

A file is prepared for use in plotting a map that identifies by a symbol each well that does not penetrate the Gardiners Clay but contacts the underlying Magothy aquifer. This indicates that the Gardiners Clay is absent at this site and provides a guide to defining the extent of that unit.

Example 3.--Select option 3; designate field A equal to 2, field B equal to 7, and field C equal to 6.

A file is prepared for use in plotting a map that shows the altitude of the bottom of all wells that penetrate the Magothy aquifer but not the underlying Raritan confining unit. The surface of the confining unit must be below this altitude.

An example of a hydrogeologic-unit map constructed with this data-retrieval system is shown in figure 4 (p. 14). This map shows the upper-surface configuration of the Raritan confining unit. All data on the map were retrieved from the data base through the discussed algorithm and are as follows:

- Upper surface altitude of the Raritan confining unit in wells where it is overlain by the Magothy aquifer, in feet. These values indicate the altitude of the unconformity between these units, a relatively flat surface.
- Upper surface altitude of the Raritan confining unit in wells where the Magothy aquifer is absent. These values indicate the altitude of the Cretaceous surface where it has experienced severe post-Cretaceous erosion, especially during the Pleistocene.
- Bottom altitude of wells that penetrate the Magothy aquifer but not the Raritan confining unit. These values indicate the highest possible surface altitude of the Raritan confining unit and are used to guide contours where wells are not deep enough to penetrate the unit.
- Locations of wells that do not penetrate the Raritan confining unit but do contact older and stratigraphically deeper hydrogeologic units (the Lloyd aquifer or unconsolidated bedrock), indicating that the Raritan confining unit is absent at this location.

When combined, these data are a valuable aid to defining the surface configuration of a hydrogeologic unit; they also facilitate definition of the extent of a hydrogeologic unit and differentiation of the parts of the surface that were shaped by differing geologic events or environments. Use of this data-retrieval method is most advantageous in areas where typically layered strata have been affected by severe erosion.

SUMMARY

The hydrogeologic data base and method of selective retrieval presented in this report offer a method to obtain hydrogeologic data for any local area on Long Island and provide the data in a format suitable for construction of hydrogeologic maps. The data represent the upper surface altitudes of the hydrogeologic units penetrated in 3,146 wells on Long Island and surrounding parts of New York City. The surface altitude of each hydrogeologic unit at a well was inferred through inspection of lithologic, mineralogic, paleontologic, and geophysical data collected from the well and by correlation of surface altitudes in nearby wells. The resulting series of correlated surface altitudes were used to define the surface configuration of the hydrogeologic units on a set of maps by Smolensky and others (in press).

As additional hydrogeologic data become available, reevaluation of correlations with nearby wells and concurrent adjustment of the data would be advisable so that the data base will accurately represent the hydrogeologic structure of Long Island's ground-water reservoir.

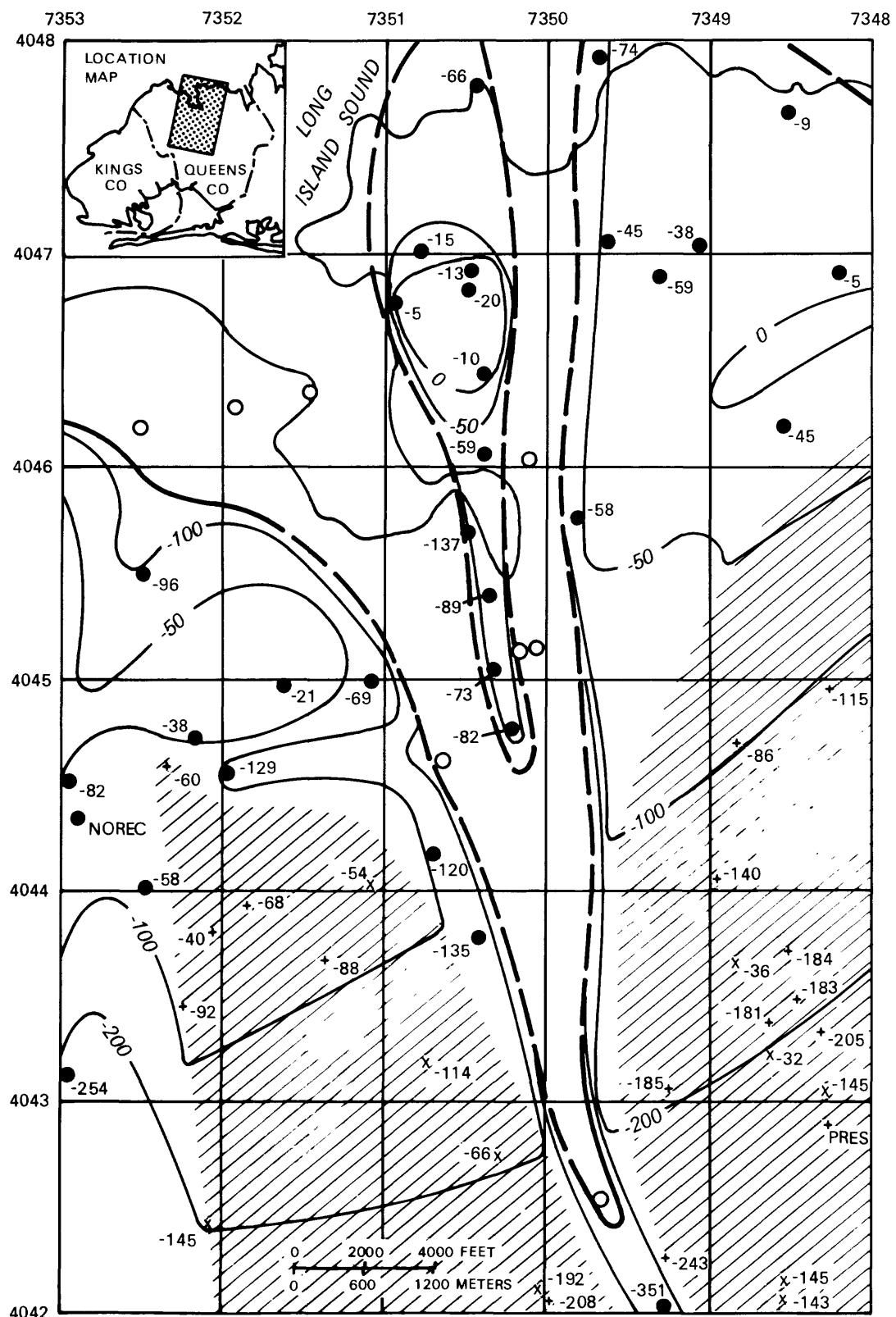


Figure 4.--Selected hydrogeologic data and estimated configuration of the upper surface of the Raritan confining unit in northern Queens County.

EXPLANATION TO FIGURE 4

- + -60 UPPER SURFACE ALTITUDE OF RARITAN CONFINING UNIT--where Magothy aquifer is overlying, in feet below NGVD of 1929.
- -38 UPPER SURFACE ALTITUDE OF RARITAN CONFINING UNIT--where Magothy aquifer was eroded away, in feet below NGVD of 1929.
- ✗ -114 ALTITUDE OF BOTTOM OF WELL THAT CONTACTS MAGOTHY AQUIFER BUT NOT RARITAN CONFINING UNIT--in feet below NGVD of 1929.
- WELL THAT DOES NOT CONTACT RARITAN CONFINING UNIT BUT DOES CONTACT AN UNDERLYING UNIT.
- *PRES UNIT IS BELIEVED PRESENT BUT ITS SURFACE ALTITUDE IS UNDEFINED AT THIS WELL.
- NOREC NO BOREHOLE INFORMATION IS AVAILABLE IN THE INTERVAL WHERE THIS UNIT IS BELIEVED PRESENT.
- — — EXTENT OF RARITAN CONFINING UNIT.
- -50 — LINE OF EQUAL UPPER SURFACE ALTITUDE--contour interval 50 and 100 feet. Datum is NGVD of 1929.
-  AREA WHERE RARITAN CONFINING UNIT IS UNCONFORMABLY OVERLAIN BY MAGOTHY AQUIFER.

4044, 7351 DEGREES AND MINUTES OF LATITUDE AND LONGITUDE, RESPECTIVELY.

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DATA BASE

Upper Surface Altitudes of Major Hydrogeologic Units at 3,146 Wells on Long Island, New York

(Locations are shown on plates 1, 2, 3)

NOTES

Well identification

Prefix letter (column 1) indicates county in which well is located:

K = Kings	B = Bronx
Q = Queens	M = New York (Manhattan)
S = Suffolk	N = Nassau
R = Richmond (Staten Island)	

Hydrogeologic unit penetrated

The term PRES (present) is entered for wells where the hydrogeologic unit is believed present but its surface altitude is difficult to identify. Where the unit is believed present but no drillers' log or other geologic information is available, the term NOREC (no record) is entered.

Other abbreviations

Mon. greensand = Monmouth greensand
Rarit. conf. unit = Raritan confining unit

Remarks

Veatch 65 - indicates well number used in Veatch (1906).
NR -10 to -30 - indicates no hydrogeologic records are available from 10 to 30 feet below sea level.

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARIT MON GREEN MACOTHY CONF LLOYD AQUIFER UNIT	BED-ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARD-CLAY	JAMECO	GRAVEL					
B 1	404828 735000	2									-63
B 2	404817 734958	6									-98
B 3	404852 734909	9									-50
B 4	405130 734816	10									-2
B 39	404831 735005	2	-90								-63
B 59	404820 735249	8	-80								-70
B 69	404845 735210	0	-76								-71
M 41	404240 740029	30	-46								-46
M 114	404236 740037	30	-47								-47
M 180	404705 735835	3	-146								-139
M 181	404432 735915	30	7								16
R A	403614 740310	0	-210								-190
R B	403609 740326	90	-216								-163
R C	403834 740413										-115
R D	403831 740440										100
R 7	403753 740437	10	-40								R80
R 14	403734 740445	25	-18								
R 18	403659 740416	45	-97								
R 22	403700 740358	15	-162								
R 65	403506 740538	10	-77								
R 66	403529 740518	12	-87								
R 73	403730 740449	50	-30								
R 79	403815 740519	120	76								
R 80	403830 740441	110	73								
R 81	403831 740433	40	-9								
R 82	403443 740316	5	-1000								
R 89	403659 740409	25	-11								
R 91	403652 740404	25	-15								
R 93	403646 740359	25	-27								
R 94	403643 740357	25	-34								

R	95	403638	740353	35	-33			
R	98	403628	740331	55	-88			
R	99	403632	740325	0	-114			
R	100	403639	740307	0	-122			
K	A	403630	740220	0	-275	-105	-170	-183
K	1	403441	735917	5	-745	-150	-163	-229
K	9	404027	735945	4	-155	-91	-126	-393
K	12	404150	735912	49	-50			-471
K	15	404148	735852	15	-99			-625
K	20	404054	735824	40	-96	-94		-145
K	23	404055	735759	57	-186			-50
K	33	404204	735708	14	-162	-82	-131	-93
K	36	404208	735602	28	-80	-77		-93
K	37	404228	735623	25	-105	-92		-93
K	45	404048	735411	61	-223	-155		-93
K	49	404317	735725	18	-315	-82		-93
K	50	404314	735728	16	-141	-75		-93
K	64.2	404201	735654	10	-158	-85		-93
K	64.5	404202	735655	10	-155	-58		-93
K	64.6	404202	735655	10	-164	-67		-93
K	82	404147	735802	20	-100			-93
K	110	404154	735943	72	-88			-93
K	167	403918	740038	13	-137	-73	-82	-93
K	178	403420	735925	5	-113			-93
K	247	403813	735351	15	-164			-93
K	249	404132	735643	40	-135	-133		-93
K	255	404150	735613	54	-69	-69		-93
K	256	404126	735725	50	-156	-124		-93
K	259	404120	735859	40	-73	-73		-93
K	261	404126	735916	35	-60			-93
K	277	404118	735854	37	-109	-86		-93
K	283	403432	735855	7	-147			-93
K	285	403804	735946	63	-149	-144		-93
K	290	404117	735900	39	-65			-93
K	316	403747	740121	65	-129	-125		-93
K	320	404119	735857	38	-76	-65		-93
K	329	403952	735555	75	-158	-90		-93
K	426	404231	735633	38	-102	-64		-93
K	458	404253	735802	5	-1048	-115		-93
K	464	403643	735452	5	-489	-159		-93

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL-IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				LOCATED NEAR WELL	REMARKS
		LEVEL	TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOOTHY AQUIFER	
K 485	404411 735706	10	-390						-55
K 514	403830 735545	28	-534	-149	-167				PRES -441
K 515	403819 735624	20	-323	-146	-180				-197 -278
K 517	403950 735709	78	-225	-100	-165				PRES
K 518	403815 735617	13	-317	-157	-184				-215 -287
K 519	403936 735613	29	-221	-131	-157				PRES
K 520	403951 735626	42	-376	-98	-131				-268 -288 -358
K 521	403849 735547	34	-398	-136	-179				-223 -323
K 522	403857 735721	50	-250	-91	-145				-240
K 523	403754 735813	47	-488	-123	-153				-204 -248 -384
K 524	403920 735551	33	-357	-146	-198				PRES
K 525	403818 735847	47	-353	-173	-217				-254 -331 -349
K 526	403949 735737	82	-318	-146	-211				-260 -288 -289
K 528	403921 735708	61	-310	-172	-195				-237 -310
K 529	403839 735847	62	-158	-151					
K 530	403818 735810	33	-127	-112					
K 531	403950 735740	82	-296	-146	-214				-291
K 532	403819 735654	11	-454	-146	-178				PRES -409
K 533	403954 735523	42	-353	-98	-131				-268 -288 -342
K 534	403819 735644	17	-452	-150	PRES				-273 -404
K 537	403851 735452	19	-194	-128	-164				PRES
K 538	404015 735227	10	-162	-60	-112				-199 -264
K 543	404107 735259	63	-222	-154	-218				-268 -288
K 569	404304 735600	15	-175	-33					
K 579	404351 735635	7	-75						-75
K 584	403742 740126	60	-85	-70					
K 611	404215 735805	10	-120	-92					WATCH 65
K 619	403929 735535	25	-426	-101	-120				
K 637	404226 735641	35	-177	-55					K2533
K 638	404022 735937	9	-166	-135	-136				K1332

K	639	404009	735940	28	-162	-122	-142				
K	640	404209	740021								
K	640.1	404209	740021								
K	640.2	404202	740015								
K	640.3	404200	740013								
K	640.4	404157	740010								
K	641	404210	740009								
K	642.1	404211	735957								
K	642.2	404218	740003								
K	646	404021	735933	25	-169	-82	-129				
K	648	404019	735915	38	-159	-112	-114				
K	650	404015	735918	40	-155	-81	-122				
K	654	404102	735933	25	-133						
K	655	404109	735859	39	-175						
K	656	404115	735856	43	-116						
K	657	404055	735838	44	-183						
K	658	404135	735809	61	-140	-103					
K	659	404111	735846	38	-132						
K	660	404119	735853	35	-90						
K	661	404130	735840	54	-94	-71					
K	662	404216	735924	0	-108						
K	663	404152	735813	14	-181	PRES					
K	664	404207	735748	17	-162	-104					
K	665	404147	735831	12	-157	-108					
K	666	404217	735733	55	-159						
K	668	404054	735947	57	-142						
K	669	404049	740001	48	-134						
K	670	404228	735718	30	-135						
K	671	404209	735906	37	-98						
K	672	404238	735715	20	-150						
K	673	404249	735708	14	-182						
K	675	404307	735545	13	-209						
K	676	404108	735910	28	-135						
K	677	404300	735813	19	-196	-30					
K	678	404253	735835	39	-182						
K	679	404321	735628	35	-183						
K	680	403959	735220	5	-429	-105	-151				
K	682	404400	735737	10	-43						
K	684	404212	735940	5	-99						
K	685	404216	735913	7	-84						
K	686	404241	735810	0	-146						
									-211	-229	-408
											-4
											-3
											-98
											-73
											-146

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				LOCATED NEAR WELL	REMARKS	
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGO THY AQUIFER	LLOYD CONF		
K 687	404212	735739	43	-157					-142	
K 688	404315	735757	0	-111					-107	
K 689	404333	735608	31	-129					-109	
K 690	404307	735651	10	-184					-163	
K 691	404258	735700	18	-177					-149	
K 692	404407	735644	3	-85					-82	
K 694	404105	735918	16	-101					-88	K725
K 698	403937	740040	0	-100						
K 699	403753	740130	75	-66						
K 700	404031	740015	6	-110						
K 701	404006	740027	0	-83						
K 702	404058	735936	28	-112					-88	
K 703	404041	740014	16	-122					-125	
K 704	404035	740030	7	-123						
K 705	404044	740100	10	-141						
K 708	404132	740008	6	-114					-82	
K 709	404156	735909	56	-83					-62	
K 710	404401	735719	13	-41					-28	
K 711	404359	735628	0	-74					-74	
K 715	404233	735644	36	-84						
K 717	404223	735716	45	-157					-141	
K 718	403721	740121	80	-355					-294	
K 720	404029	740006	13	-90					K1091	
K 723	404202	735914	57	-84					-72	
K 724	404239	735633	48	-89					K1283	
K 725	404104	735922	14	-101					-80	
K 728	404147	735906	36	-96					-79	
K 729	404141	735826	45	-130					-108	
K 730	404136	735902	36	-98					-68	
K 731	404107	735914	23	-187					-160	

K 887	404201	735566	49	-76	-46			
K 893	404226	735607	20	-98	-61			
K 894	404215	735555	30	-252	-67			
K 898	404248	735709	-3	-71				
K 910	404010	735444	45	-137	-126			
K 916	404019	735921	13	-149	-118			
K 917	404028	735906	10	-96				
K 920	404020	735922	13	-151	-122			
K 921	404038	735741	118	-213	NOREC			
K 922	403919	740027	12	-138	-87	-102		
K 930	404037	735904	20	-160	-123	-129		
K 944	403912	740052	18	-139	-84	-102		
K 952	404146	735602	67	-55	-55			
K 955	404225	735610	18	-54	-47			
K 956	404037	735905	22	-160	-96	-130		
K 1010	404009	735941	20	-161	PRES	-136		
K 1012	403912	740052	16	-159	-100	-124		
K 1015	404146	735807	20	-72	-72			
K 1018	404146	735807	18	-98	-44			
K 1020	403420	735942	5	-108				
K 1021	403428	735859	10	-110				
K 1030	404037	735905	20	-162	-123	-132		
K 1031	404204	735554	49	-56	-56			
K 1051	404150	735803	20	-66	-60			
K 1054	404029	735230	26	-64	-63			
K 1056	403452	735248	7	-733				
K 1067	403603	735251	13	-711	-127			
K 1073	404117	735848	32	-88				
K 1091	404030	740007	11	-113	-38	-88		
K 1112	404314	735723	7	-48				
K 1130	404225	735613	18	-71	-63	-213	-493	-683
K 1148	403916	740036	11	-139	-86	-217	-487	-693
K 1153	404206	735605	40	-61	-61			
K 1160	404201	735656	10	-125	-69	-101		
K 1190	404056	740025	10	-55	-54			
K 1191	404055	740026	1	-59	-59			
K 1192	404055	740011	30	-82				
K 1271	403920	740048	5	-1498	-90	-134		
K 1273	404206	735605	40	-235	-65			
K 1274	404202	735655	10	-155	-55	-140		

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL						LOCATED NEAR WELL	REMARKS	
		TOP	BOTTOM	GARDINERS	JAMECO	MON GREEN	MAGOOTHY	CONF	LLOYD	AQUIFER	ROCK	
K 1275	404202 735655	10	-165	PRES	-129							K3133
K 1283	404239 735632	45	-195									VEATCH 38
K 1286	404012 735229	10	-154	-60	-108							VEATCH 62
K 1287	403903 735734	50	-111									VEATCH 136
K 1288	404143 735809	30	-78	-78								
K 1303	404258 735734	18	-74	-40								
K 1305	404200 735701	10	-156	-82	-112							K2282
K 1309	403940 735458	30	-201	-124	-133							K3133
K 1313	404146 735756	31	-130	-72								K1340
K 1319	404145 735757	31	-114	-72								K1340
K 1322	403423 735954	5	-180	-119	-160							
K 1332	404022 735937	10	-168	-121	-158							
K 1336	404204 735802	50	-113	-62								K2136
K 1339	403941 735541	40	-129	-119								
K 1340	404145 735757	25	-120	-82								
K 1343	403934 735639	39	-129	-123								
K 1344	404200 735701	10	-161	-85	-101							K1346
K 1346	404232 735532	39	-129	-123								K3133
K 1354	403911 735832	70	-110	-95								
K 1355	403905 735828	48	-129	-74								K1360
K 1359	403908 735526	28	-177	-112								
K 1360	403904 735828	45	-90	-70								
K 1363	403923 735527	33	-137	-131								
K 1370	404338 735555	27	-50									
K 1486	404147 735805	25	-83	-75								
K 1490	404229 735623	36	-100	-70								
K 1494	403841 740051	80	-164	-162								
K 1504	403928 735738	64	-116	-114								
K 1508	403912 735545	28	-118	-103								
K 1510	404003 735517	52	-153	-113								

K 1536	404033	735950	14	-142	-109	-122
K 1548	404145	735804	38	-78	-78	
K 1558	403420	735925	5	-113		
K 1560	404334	735552	30	-71		
K 1561	404111	740020	5	-55	-55	
K 1575	404211	735534	30	-55	-55	
K 1578	404058	735808	74	-129	-129	
K 1600	404202	735657	10	-147	-70	-101
K 1629	404201	735656	10	-160	-60	-90
K 1641	403900	735728	50	-154		
K 1682	404205	735740	6	-141	PRES	-122
K 1713	404046	735644	50	-132	-128	
K 1857	404014	735533	100	-118	-108	
K 1900	404028	740049	10	-125	-119	
K 1932	403831	735611	26	-125		
K 1977	404308	735547	15	-148		
K 1990	404234	735536	15	-55		
K 2044	404135	735919	48	-92		
K 2056	404120	740006	10	-75	-52	-61
K 2059	403709	735923	38	-184	-139	-158
K 2069	404202	735710	10	-167	-76	-123
K 2070	403913	740053	18	-151	PRES	PRES
K 2136	404204	735610	50	-62		
K 2172	404144	735919	50	-66		
K 2173	404215	735816	5	-110		
K 2204	403634	735729	19	-171	-148	-154
K 2227	404413	735726	10	-40		
K 2262	404267	735737	8	-53	-53	
K 2286	404158	735653	15	-175	-68	-98
K 2326	403630	735519	15	-185	-181	
K 2342	403641	735510	5	-149	-149	
K 2434	404200	735659	10	-186	-72	-102
K 2450	404033	735730	10	-91		
K 2488	403421	735826	10	-214	-148	-176
K 2512	404009	735953	10	-142	-120	-129
K 2513	404009	735953	10	-120	-109	
K 2533	404228	735639	30	-62	-49	
K 2556	404047	735716	65	-100		
K 2568	404223	735527	20	-80		
K 2582	403732	735737	10	-186	-77	-140

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARI	MON	GREEN	MAGOOTHY	CONF	LLOYD	BED-ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	AQUIFER	UNIT AQUIFER									
K 2859	403451	735856	10	-490	-160	-198	-292	-360	-458							
K 2860	403822	735255	10	-206	-163	-183										
K 3129	403748	735721	30	-240	PRES	-204									K3132	
K 3130	403748	735719	30	-258	-172	-206									K3132	
K 3131	403749	735716	30	-261	-160	-200									K3132	
K 3132	403750	735717	30	-280	-180	-215										
K 3133	404158	735658	15	-188	-83	-107									K3184	
K 3151	403921	735450	29	-232	-66	-103									K3184	
K 3176	403920	735446	29	-146	-47	-136									K3184	
K 3177	403921	735447	29	-146	-46	-131									K3184	
K 3178	403922	735448	29	-146	-43	-131									K3184	
K 3179	403923	735448	29	-146	-43	-136									K3184	
K 3180	403921	735446	29	-173	-56	-133									K3184	
K 3181	403922	735446	29	-146	-54	-133									K3184	
K 3182	403923	735447	29	-146	-57	-138									K3184	
K 3183	403926	735449	29	-173	-56	-133									K3184	
K 3184	403924	735447	29	-174	-42	-134										
Q 13	404506	735554	24	-65											-65	
Q 17	404427	735656	17	-158											-11	
Q 27	404435	735221	57	-244											-244	
Q 29	404229	735202	80	-145												
Q 31	404224	735133	70	-421	-84											
Q 33	404701	735049	27	-183												
Q 37	404401	734659	72	-71												
Q 52	404207	735341	80	-70	-70											
Q 62	404502	735510	38	-91											-91	
Q 64	404429	735257	35													Q268
Q 65	404500	735106	20	-264											-69	
Q 95	404526	735611	20	-72											-241	
Q 111	403635	734539	9	-1005											-70	
																Q1932

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL						LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND	RARIT AQUIFER	LLOYD UNIT	BED-ROCK		
Q 338	403957 734805	10	-220	-91	-195						
Q 339	404002 734830	10	-197	-103	-174						
Q 340	404026 735135	9	-153	PRES	-71						
Q 341	404243 735134	70	-176			-58					
Q 344	403959 735005	10	-326		-110		-178				
Q 345	404006 735040	10	-209		-143		-189				
Q 350	404020 735007	33	-622	-103		-208		-265		-577	
Q 364	404449 735333	63	-126			-27					
Q 369	404438 735520	80	-72							-61	
Q 374	404632 735530	33	-31							-17	
Q 375	404633 735558	15	-43							-41	
Q 376	404518 735521	43	-79							-59	
Q 377	404539 735503	64	-23							-3	
Q 378	404549 735455	75	-28							-8	
Q 379	404529 735512	52	-95							-74	
Q 380	404559 735447	78	-30							-10	
Q 381	404647 735354	19	-76							-56	
Q 382	404617 735429	58	-69							-51	
Q 386	404451 735534	75	-147							-73	
Q 387	404425 735539	64	-112							-88	
Q 388	404433 735538	70	-133							-106	
Q 389	404508 735529	35	-49							-28	
Q 390	404351 735605	23	-188							-171	
Q 391	404357 735557	62	-135							-115	
Q 392	404403 735549	65	-101							-85	
Q 393	404345 735557	17	-153							-59	
Q 394	404411 735542	48	-127							-107	
Q 395	404422 735704	7	-67							-67	
Q 398	404437 735642	2	-65								
Q 399	404447 735653	13	-55								

Q	403	4033352	735440	5	-865	-192	-206	-237	-486	-643	-865
Q	404	404652	735517	43	-3						8
Q	405	404702	735347	0	-95						-69
Q	406	404646	735514	53	-29						-24
Q	407	404623	735521	22	-28						-23
Q	408	404610	735608	6	-51						-42
Q	411	404609	735435	64	-61						-41
Q	412	404549	735424	66	-62						-42
Q	413	404612	735510	56	-55						-38
Q	414	404618	735352	21	-102						-71
Q	415	404629	735342	8	-102						-82
Q	416	404646	735325	0	-143						-89
Q	417	404522	735447	46	-75						-54
Q	422	404430	735728	7	-59						-49
Q	423	404435	735706	17	-52						-42
Q	425	404444	735535	75	-84						-64
Q	426	404446	435500	63	-84						-64
Q	427	404436	735502	91	-136						-37
Q	428	404415	735507	98	-169						-86
Q	429	404407	735529	64	-170						-31
Q	431	404409	735503	104	-139						-71
Q	432	404401	735509	115	-187						-68
Q	434	404353	735508	89	-174						-30
Q	435	404346	735511	63	-196						-78
Q	436	404313	735526	8	-209						-155
Q	437	404320	735501	5	-255						-131
Q	438	404325	735514	4	-204						-187
Q	439	404513	735056	10	-118						-113
Q	440	404446	735041	27	-94						
Q	441	404500	735023	2	-83						
Q	442	404459	734959	10	-84						
Q	443	404439	735049	27	-76						
Q	444	404435	735036	2	-80						
Q	446	404414	735047	2	-88						
Q	447	404402	735039	2	-89						
Q	448	404320	735014	7	-53						
Q	449	404337	735017	1	-90						
Q	450	404545	735022	10	-72						
Q	451	404518	735038	17	-142						
Q	452	404504	735037	4	-87						

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET, ABOVE OR BELOW SEA LEVEL		RARIT MON GREEN MAGOTHY CONF LLOYD AQUIFER UNIT	BED-ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL				
Q 453	404446 735535	68	-79					-77	Q1098
Q 455	404701 735048	37	-63					-15	
Q 460	404541 734529	11	-46					-2	-146 -297 -399 Q484
Q 461	404541 734529	11	-366					-2	-146 -297 -399 Q484
Q 462	404541 734529	7	-398					-4	-162 -275 -393 Q484
Q 464	404541 734529	6	-361					-4	-145 -272 Q484
Q 466	404541 734529	7	-384					3	-130 -305 Q484
Q 468	404541 734529	2	-398					-19	-138 -300 Q484
Q 480	404541 734529	9	-381					-28	-183 -278 Q484
Q 484	404541 734529	7	-384					-3	-154 -259 Q484
Q 490	404704 734939	5	-219					-45	-135 -219 Q495
Q 491	404704 734939	9	-205					-53	-143 Q495
Q 492	404704 734939	6	-222					-59	-171 Q495
Q 493	404704 734939	7	-212					-44	-168 -208 Q495
Q 494	404704 734939	5	-213					-59	-153 -208 Q495
Q 495	404704 734939	4	-189					-57	-170 Q1071
Q 542	403453 734959	6	-191					-291	-455 -684 Q571
Q 556	404200 734644	32	-391					-106	PRES Q1507
Q 557	404223 734800	58	-139					-56	
Q 558	404054 734917	33	-130					-24	
Q 559	404021 734839	16	-281					-198	-256 Q1839
Q 561	404139 734715	25	-65					-120	-238 -458 -649 Q564
Q 562	404140 734716	23	-658					-24	
Q 563	404302 734513	70	-68					-24	
Q 564	404302 734513	70	-229						
Q 565	404202 734916	65	-495					-351	-415
Q 566	404154 734937	61	-231					-84	-202
Q 567	404254 734813	131	-504					-79	PRES -410 Q2137
Q 568	404200 734403	50	-819					-55	-354 -554 -811
Q 571	404200 734644	30	-602					-480	-600
									NR 30 T0 -479

Q	572	404150	734719	25	-758			NOREC	-650		Q1839	NR	25	T0	-649
Q	580	404425	734341	115	-553			15	-293	-469					
Q	581	404420	734340	112	-570			0	-272	-466	Q1914				
Q	582	404418	734339	110	-591			16	-286	-461	Q1914				
Q	584	404257	734937	10	-620			-120	-320	-440					
Q	586	404347	735025	15	-420			PRES	-135	-325	-414	Q2413			
Q	595	404458	734810	20	-427			-115	-235	-414					
Q	597	404325	735001	0	-89										
Q	601	404524	735022	0	-156			-89							
Q	602	404453	735533	50	-169										
Q	603	404351	735558	69	-133										
Q	633	404004	735022	11	-180			-117							
Q	634	404024	735135	10	-139			-131							
Q	669	404148	735028	10	-149			-87							
Q	676	403909	734739	0	-203			-140	-200						
Q	678	403953	734526	10	-261			-99							
Q	680	403957	734831	10	-182			-105	-175						
Q	681	403958	734715	5	-151			-84	-137						
Q	682	404001	734653	7	-251			-76	-147						
Q	683	404001	734602	10	-283			-62	-202						
Q	684	403959	734553	10	-410			-68	-160						
Q	689	404116	734822	40	-82			-71							
Q	690	404119	734736	20	-180			-75	-169						
Q	710	404605	734643	75	11										
Q	720	403955	734446	18	-388			-45	-81						
Q	721	403950	734358	22	-390										
Q	722	403956	734344	17	-373			-80							
Q	724	404049	734501	27	-330			-41							
Q	952	404425	735523	29	-28			-53							
Q	954	404536	735626	12	-289										
Q	957	404268	734810	45	-137			-49							
Q	962	404506	735642	20	-105			-25							
Q	964	404546	735243	20	-105										
Q	966	404440	735724	8	-192			-37							
Q	978	404443	735423	60	-110			-42							
Q	985	404207	734832	35	-143			-61	-72	-234					
Q	1026	404446	735011	8	-287			-82	-232						
Q	1027	404446	735013	8	-275										
Q	1028	404438	735039	5	-419			-336	-467	-731	-316				
Q	1030	403451	735004	6	-1043	-192	-240				-974				

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	TOP BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND AQUIFER	RARI CONF UNIT	LLOYD AQUIFER	BED-ROCK	LOCATED NEAR WELL	HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL	
										ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL
Q 1032	404459 735138	40	-223							-21	-182
Q 1035	404215 734752	62	-215							-89	
Q 1036	404209 734831	55	-128							-46	
Q 1037	404209 734831	51	-145							-23	
Q 1041	404528 734441	5	-188							-76	
Q 1042	404530 734442	5	-199							-76	
Q 1043	404532 734442	5	-120							-73	
Q 1045	404537 734443	5	-181							-61	
Q 1048	404520 734437	6	-177							-93	
Q 1049	404519 734439	6	-154							-109	
Q 1053	404518 734440	12	-190							-132	
Q 1056	404523 734437	5	-166							-125	
Q 1057	404527 734439	9	-38							-38	
Q 1063	404132 734540	32	-112							-29	
Q 1064	404156 734826	35	-55								
Q 1071	403454 734956	12	-851							-268	
Q 1085	404348 735531	6	-164							-468	
Q 1086	404445 735210	52	-297							-38	
Q 1087	404444 735211	52	-66							-266	
Q 1093	404631 735449	53	11								11
Q 1095	404359 734741	38	-14							-14	
Q 1098	404439 735534	72	-143								-62
Q 1175	404002 734834	10	-206							-113	
Q 1197	403958 734502	15	-119							-47	
Q 1221	404522 735624	17	-161							-90	
Q 1230	403539 734626	10	-154								
Q 1239	404218 734751	50	-150							-33	
Q 1241	404445 735211	52	-285								
Q 1246	404520 735553	42	-178								
Q 1257	404548 735542	30	-120								

Q 1258	404446 735547	55	-8	Q2333
Q 1272	404525 735640	10	-185	
Q 1274	404326 735449	15	-65	-40
Q 1275	404217 734754	50	-111	-33
Q 1278	404313 735044	56	-114	-37
Q 1291	404132 734537	42	-29	-27
Q 1293	404424 734350	115	-565	-23
Q 1304	403952 734916	14	-140	-132
Q 1305	403948 734538	12	-166	-66
Q 1311	404250 734538	58	-349	-40
Q 1314	404210 734803	38	-177	-100
Q 1328	404456 735303	53	-62	-59
Q 1352	404618 735157	13	-195	-23
Q 1353	404756 734942	0	-162	-74
Q 1372	404308 734357	80	-142	-31
Q 1373	404656 735029	50	-212	-13
Q 1374	404653 735030	55	-200	-144
Q 1376	404152 735109	83	-128	20
Q 1378	404120 735112	42	-170	-151
Q 1379	404154 735107	83	-127	-111
Q 1383	403610 734514	26	-224	-114
Q 1384	404308 734357	80	-152	-26
Q 1392	404227 734750	60	-301	-72
Q 1400	404401 735229	20	-282	-260
Q 1412	404259 735427	42	-98	-58
Q 1423	404233 734630	55	-247	-85
Q 1447	404148 734847	45	-90	-84
Q 1449	404107 734805	28	-108	-103
Q 1450	404207 734459	55	-77	-62
Q 1465	404604 735025	12	-115	-59
Q 1472	404415 734657	70	-184	-75
Q 1477	404050 735022	34	-144	-111
Q 1483	404055 735118	25	-159	-120
Q 1493	404140 735041	45	-98	-143
Q 1497	404653 735030	55	-169	25
Q 1498	404653 735030	55	-169	-130
Q 1502	404426 735614	15	-78	-169
Q 1503	404316 734837	75	-32	-76
Q 1507	404222 734750	58	-99	-32
Q 1511	404139 735105	48	-97	-94

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL		GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND	RARIT AQUIFER	MAGOOTHY CONF.	LLOYD UNIT	BED-ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM											
Q 1516	404539 734957	35	-77											
Q 1521	404029 734553	20	-162	-44	-126									
Q 1528	404137 735158	70	-118	-114										
Q 1532	404134 734542	40	-414											
Q 1535	404249 734435	70	-380											
Q 1536	404324 734554	190	-83											
Q 1542	404653 735030	53	-171											
Q 1600	404330 734503	98	-356											
Q 1619	404554 735558	15	-28											
Q 1620	404439 735413	60	-173											
Q 1629	404249 734435	70	-242											
Q 1630	403518 734827	7	-168	-119										
Q 1632	404435 735608	18	-46											
Q 1635	404510 735553	3	-37											
Q 1638	404424 735615	13	-60											
Q 1640	404617 734404	80	-56											
Q 1678	404541 735032	12	-258											
Q 1695	404615 734409	85	-84											
Q 1730	404516 735035	10	-260											
Q 1736	404617 734410	88	-30											
Q 1738	404446 735635	15	-131											
Q 1747	404323 734553	180	-93											
Q 1787	404303 734816	110	-138											
Q 1789	404552 734621	80	-9											
Q 1802	404338 735115	90	-72											
Q 1811	404151 734921	50	-97	-95										
Q 1812	404303 734816	110	-145											
Q 1815	404207 734459	58	-248											
Q 1823	404057 734854	40	-242	-85	-183									
Q 1835	404145 734734	35	-313	-57										

Q 1839	404150	734719	25	-61		-20		
Q 1841	404423	734337	115	-242	1			Q3003
Q 1850	404516	734230	132	-71	-43	-88		Q1876
Q 1851	404341	735122	80	-223				
Q 1861	404019	734717	9	-176	-130			
Q 1876	404019	734717	8	-172	-84	-140	26	
Q 1909	404515	734231	132	-118				Q3003
Q 1912	404516	735620	40	-360				
Q 1914	404418	734342	120	-138				
Q 1918	404332	735517	15	-67	-63			
Q 1922	404550	735338	30	-103				
Q 1923	404250	734538	65	-246				Q1957
Q 1924	404141	734413	47	-442				Q2443
Q 1926	404620	734740	90	-200				
Q 1929	403631	734542	9	-1036				Q1932
Q 1930	403633	734545	8	-122				Q1932
Q 1931	403634	734544	8	-132				Q1932
Q 1932	403635	734542	8	-126				
Q 1933	404443	735307	77	-178				
Q 1937	404540	734629	68	-15	5			
Q 1941	404341	734850	78	-36				
Q 1957	404250	734538	65	-236				Q2443
Q 1958	404141	734413	47	-395				
Q 1965	404212	734753	36	-227				
Q 1978	404451	735336	65	-144				
Q 1979	404451	735335	65	-25				Q2148
Q 1982	404332	734429	90	-303				Q2188
Q 1983	404217	734915	70	-371	-53			
Q 1984	404137	734522	45	-356				
Q 1985	404306	734637	145	-155				Q2001
Q 1999	404156	734613	35	-366	-40			
Q 2000	404332	734429	90	-28				
Q 2001	404250	734634	123	-84				Q2188
Q 2003	404156	734526	55	-281				Q2028
Q 2025	404648	735425	25	-42				
Q 2026	404042	734337	40	-410				
Q 2028	404156	734526	54	-261				
Q 2080	404600	735518	45	9				Q2332
Q 2122	404205	735000	60	-355	-151			
Q 2137	404254	734813	130	-120	-80			

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARIT MON GREEN MAGOTHY CONF LLOYD AQUIFER UNIT	BED-ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL						
Q 2138	404208 735002	60	-63								Q2332
Q 2140	404124 734936	48	-74	-76	-183						Q2189
Q 2144	404601 735011	12	-134								Q2592
Q 2148	404452 735337	65	-26								
Q 2149	404126 734646	25	-75	-71							
Q 2188	404332 734429	90	-192								
Q 2189	404124 734936	48	-83	-80							
Q 2195	404546 734949	25	-67								
Q 2202	404312 735424	52	-193								
Q 2205	404117 734522	45	-351								
Q 2206	404036 734436	25	-108	-48	-89						
Q 2227	404056 734627	20	-399	-59	-268						
Q 2243	404117 734522	45	-62								
Q 2255	404224 734503	63	-290								Q2300
Q 2259	404216 734423	55	-319								Q2276
Q 2261	404404 735103	30	-54								
Q 2266	403626 734457	22	-110								
Q 2272	404241 735359	95	-52								
Q 2273	404434 735156	30	-247								
Q 2274	404740 734832	20	-148								
Q 2275	404216 734423	55	-50								
Q 2276	404216 734423	55	-319								
Q 2280	404622 735129	8	-194								
Q 2282	404733 734747	9	-188								
Q 2289	404012 735006	30	-132								
Q 2299	404224 734503	63	-100								Q2300
Q 2300	404224 734503	63	-220								
Q 2309	404602 735013	5	-123								Q2592
Q 2321	404245 734406	65	-309								Q2343
Q 2325	404208 735002	60	-180	-76	-149						Q2332

Q 2329	404159	734629	30	-79		-38		
Q 2331	404703	734905	65	-40				
Q 2332	404208	735002	60	-192	-71	-165		
Q 2333	404443	735601	25	-12			-12	
Q 2343	404245	734406	65	-175		-77		
Q 2349	403935	734515	10	-80	-70			
Q 2356	404234	734629	50	-165		-97		
Q 2361	404329	734827	74	-262		-33	-198	
Q 2362	404320	734818	82	-244		-63	-205	
Q 2363	404343	734831	64	-366		-30	-184	
Q 2364	404323	734838	74	-264		-32	-177	
Q 2366	404569	735512	45	2				
Q 2373	404323	734838	74	-193		-31	-181	
Q 2374	404323	734838	74	-193		-31	-181	
Q 2377	404510	735005	20	-250				
Q 2378	404718	734622	12	-162				
Q 2384	404022	734957	27	-126	-111			
Q 2385	404343	735008	5	-99				
Q 2386	404411	735042	5	-130		-120		
Q 2390	404434	735159	35	-252		-134	-232	
Q 2392	404349	735009	5	-160				
Q 2393	404434	735159	35	-130		-129		
Q 2394	404434	735158	35	-115				
Q2400A	404404	735040	13	-104		-88		
Q2400B	404404	735040	18	-121				
Q 2402	404509	735011	20	-253			-253	
Q 2404	404352	734449	160	-250		-30	-250	
Q 2405	404248	734602	62	-288		-75	-224	
Q 2408	404329	734827	74	-85		-32		
Q 2409	404329	734827	74	-207		-32	-183	
Q 2410	404411	735019	5	-195				
Q 2413	404336	735028	8	-127		-122		
Q 2416	404504	735018	7	-266		-54	-200	
Q 2417	404455	735052	10	-293		-71	-213	
Q 2419	404503	735019	7	-264				
Q 2420	404503	735020	7	-267		-73	-216	
Q 2422	404025	734638	20	-361	-63	-163	-300	
Q 2426	403919	734420	6	-238	-44		-124	
Q 2430	404135	734402	47	-413		-53	-383	
Q 2432	404248	734602	62	-230		-89	-225	

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL						LOCATED NEAR WELL	REMARKS
		TOP LEVEL	BOTTOM LEVEL	GARDINERS CLAY	JAMECO GRAVEL	MONSANTO SAND	GREEN MAGOTHY CONF.	LLOYD AQUIFER	BED-ROCK		
Q 2435	404352	734449	160	-202						-34	
Q 2437	404329	736214	80	-118						-87	
Q 2443	404135	734402	47	-319						-64	
Q 2445	404500	735606	26	-84						-11	
Q 2468	404627	735024	10	-165						-28	
Q 2588	404512	734456	90	-67						-66	
Q 2592	404603	735008	12	-238						-18	
Q 2600	404506	734613	65	-25						-238	
Q 2685	404412	734538	105	-41							
Q 2706	404245	735017	110	-66							
Q 2712	404450	734402	185	-53						15	
Q 2721	404507	735620	35	-265							
Q 2765	404038	734450	25	-425							
Q 2791	404624	734835	80	-60							
Q 2837	404237	735136	60	-120	-80						
Q 2955	404040	734451	25	-430							
Q 2987	404515	734231	132	-327							
Q 2988	404402	734858	104	-360							
Q 2990	404129	734849	50	-284	-115	-164					
Q 2991	404310	734700	110	-404							
Q 3000	404413	734701	70	-209							
Q 3002	404610	734621	70	-47						1	
Q 3003	404515	734231	140	-183						21	
Q 3012	404310	734359	84	-42						-20	
Q 3014	404310	734700	110	-227						-37	
Q 3020	404340	734231	95	0						-66	
Q 3026	404237	734554	60	-275						-85	
Q 3029	404059	734508	25	-410						-44	
Q 3030	404356	735151	18	-320						-42	
Q 3036	404354	735200	20	-279						-40	

Q3034
 Q3062
 Q3036

-257
 -401
 -68
 -235
 -288

-85
 -140
 -224
 -215
 -211

-274
 -140
 -249
 -400

-274
 -140
 -249
 -400

-200
 1
 21
 -20
 -211

Q	3034	404237	734554	60	-228	-85	
Q	3056	404054	734403	40	-429	-86	-425
Q	3062	404059	734508	25	-405	-44	-401
Q	3083	404056	734406	40	-323	-49	
Q	3109	403933	734829	22	-427	-234	-376
Q	3110	403845	734757	10	-461	-104	-186
Q	3111	403850	734648	14	-486	-112	-198
Q	3112	403939	734728	11	-418	-99	-145
Q	3156	404050	734755	35	-278	-80	-159
Q	3157	404107	734805	28	-259	-102	-173
Q	BWS2	404424	735610	25	-29	-244	-257
Q	BWS3	404338	735414	29	-158	-86	-29
Q	BWS4	404446	735406	49	-127	PRES	-158
Q	BWS5	404612	735233	23	-159	-127	-447
Q	BWS7	404429	734632	61	-535	-32	-293
Q	BWS9	404233	734940	115	-537	-161	-293
QBWS10		404612	734611	61	-411	-21	-381
QBWS12		404442	734850	16	-406	-52	-381
QBWS13		404308	735257	102	-296	-254	-322
QBWS14		404303	734914	85	-490	-185	-294
QBWS15		404612	734834	97	-299	-330	-450
QBWS16		404530	735231	60	-172	-45	-258
QBWS17		404431	735258	38	-242	-195	-172
QBWS18		404227	735106	77	-429	-82	-222
QBWS19		404655	734813	65	-297	-66	-429
N	2	403930	734017	19	-63	-185	
N	3	403931	734234	5	-460	-96	
N	6	403953	734316	10	-328	-82	
N	7	404043	734131	20	-950	-166	
N	10	404229	734246	51	-351	-55	
N	11	404224	734238	50	-390	-358	
N	15	404427	734149	116	9	9	
N	16	404416	734015	89	-356	-343	
N	17	404435	734020	104	-366	-21	
N	19	404516	734112	121	1	23	
N	20	404605	734232	210	-6	65	
N	22	404642	734405	16	-134	-57	
N	23	404642	734405	18	-449	-54	
N	24	404735	734242	12	-448	-178	-416
N	29	404830	734148	29	-180	-171	-416

20FT

-31

N9151
N1958

N6918

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL- IDENT- IFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARIT CONF AQUIFER UNIT	LLOYD GREEN MAGOOTHY SAND AQUIFER GRAVEL	BED- ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARD- INERS CLAY	MON GREEN MAGOOTHY SAND AQUIFER GRAVEL							
N 31	40480000734429	9	-363					PRES		-355		
N 33	4050110734150	20	-352							-345		
N 36	4051110734302	46	-234							-199		
N 37	4051130734302	52	-88							-166		
N 38	4051320734141	85	-337							-330		
N 41	4035380733938	6	-1251							-134		
N 42	4035370733939	6	-1197							-124		
N 43	4035310734012	6	-1279							-85		
N 44	4035310734023	6	-1276							PRES		
N 45	4035380733943	6	-1127							-786		
N 46	4035340733527	8	-1258							-128		
N 47	4037110733916	6	-176							-814		
N 48	4039240733917	17	-506							-1009		
N 50	4039230733916	16	-507							-92		
N 52	4039290733826	27	-523							-854		
N 54	4039320733749	28	-73							-92		
N 57	4039130733717	11	-139							-130		
N 62	4039050733615	10	-190							-39		
N 67	4039220733535	24	-1028							-90		
N 68	4039220733532	25	-527							-90		
N 69	4039220733537	21	-484							-36		
N 72	4041040733741	44	-572							-25		
N 73	4040580733553	30	-686							-47		
N 82	4043080733707	61	-481							PRES		
N 83	404306 733713	1	-1004							PRES		
N 87	4043240733755	1	-793							-60		
N 93	4043520733831	75	-7									
N 97	4044480733812	114	-261									
N 98	4044460733813	114	-255									
N 101	4045210733534	108	-291									

N	102	40453407333743	175	78															
N	105	40465207337277	154	-353															
N	107	4047330733524	212	-294															
N	109	4049250733817	48	-481															
N	110	4049310733821	56	-463															
N	118	4052440733509	65	-412															
N	119	4052440733523	80	-492															
N	120	4052410733526	80	-478															
N	122	405352733704	5	-470															
N	123	4053530733645	25	-279															
N	128	4035580733027	6	-1028															
N	129	4036240733014	10	-946															
N	130	4037520733010	5	-63															
N	131	4039490733417	11	-519															
N	133	4039530733420	21	-508															
N	134	4039500733415	16	-512															
N	135	4040020733423	20	-130															
N	136	4040450733418	25	-97															
N	137	4039530733050	10	-80															
N	138	4040560733107	25	-100															
N	140	4042300733134	55	-101															
N	141	4041420733435	28	-81															
N	152	4046280733418	141	-343															
N	167	4051480733417	55	-68															
N	173	4053370733448	38	-360															
N	181	4040300732908	24	-988															
N	184	4040250732802	10	-151															
N	185	4043000732733	45	-227															
N	190	4044500732654	146	-554															
N	198	4049170732929	240	-685															
N	199	4049220732924	235	-376															
N	216	4049550734524	30	-482															
N	248	4039467344252	14	-176															
N	263	4045320734229	171	-584															
N	268	4046050734018	172	56															
N	273	4047070734353	58	-35															
N	314	4051430734336	60	-190															
N	319	4035130733957	10	-376															
N	320	4036230733925	5	-378															
N	373	4046250733506	149	-31															

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL		RARIT MON GREEN MAGOOTHY CONF LLOYD AQUIFER UNIT	BED-ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARD- INERS CLAY	JAMECO GRAVEL SAND				
N 374	4046430733504	205	102						188
N 375	4046530733520	182	32						162
N 377	4047220733529	200	-143						173
N 381	4047560733641	300	1						200
N 384	4046590733837	132	-118						32
N 417	405403 733644	18	-228						-197
N 418	405202 733638	10	-215						-215
N 420	405401 733616	10	-332						-250
N 440	404030733103	8	-72	-40					-80
N 502	4053460733113	8	-362						20FT -20
N 504	4054220733038	19	-279						-152
N 506	4054450733135	8	-310						-308
N 558	4046440734400	44	-138						-131
N 559	403713 734333	20	-109	-64					-276
N 570	4049190732931	237	-369						-292
N 576	4046050733134	144	-265						N4388
N 578	4044550733909	110	-305						-109
N 599	4048560734123	76	-378						-278
N 613	4051480733417	55	-85						-27
N 629	4041410734143	55	-16						-369
N 637	4038210733450	5	-182						-27
N 638	4048110733604	295	-265						138
N 650	4045330733936	108	-242						48
N 651	4045340733933	105	-243						17
N 661	4051510733816	60	-343						-14
N 662	4049400733927	11	-353						-47
N 687	404743 734444	8	-362						138
N 693	404280734242	90	-17						N851
N 695	4051470733749	47	-247						N8048
N 842	4050320733912	8	-433						N906

N 906	4050340733912	9	-410			PRES	-427
N 914	403932 734243	10	-104			-88	
N 941	4041470734001	55	-12			-8	
N 1038	4041140733648	60	-55			-15	
N 1122	4046450734033	179	40			75	
N 1123	4045390734004	125	32			66	
N 1155	4048000733712	261	31			73	
N 1175	4049020733539	177	19			97	
N 1176	4047360733531	195	-3			163	
N 1177	4046480733513	183	37			156	
N 1190	4051320733407	128	29			35	
N 1210	4050230733155	187	44			90	
N 1212	4048400733119	227	42			104	
N 1227	4050550732950	172	38			132	
N 1228	4049540732939	224	35			38	
N 1229	4048460732910	251	50			93	
N 1244	4049100732708	249	-13			184	
N 1245	4048200732659	260	58			192	
N 1246	4047030732642	186	62			97	
N 1291	4049480734128	105	-296			-235	
N 1293	4047070733732	162	18			22	
N 1298	404655 734445	15	-370			-70	
N 1300	4045490734021	165	-210			54	
N 1326	4047220734352	96	-99			12	
N 1328	4047130734105	177	-593			55	
N 1332	4045300734230	162	-48			43	
N 1335	4037440734230	25	-117			-110	
N 1346	403850 734238	5	-143			-142	
N 1420	4043520733820	74	-800			-6	
N 1476	4050570733251	130	47			101	
N 1477	4051250733047	216	22			30	
N 1481	4046080733029	149	72			78	
N 1486	4053250732933	5	-495			-475	
N 1499	4037590733920	6	-239			-51	
N 1581	4049480734126	108	-290			-256	
N 1585	4042240734041	65	-23			-13	
N 1602	4040250733932	30	-563			-52	
N 1603	4041120733935	32	-507			-26	
N 1618	404631 734215	83	-502			-52	
N 1651	4052310733633	162	-308			-259	
				20FT	-15		

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				LOCATED NEAR WELL	REMARKS
		LEVEL	TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND	RARIT AQUIFER	
N 1658	40444807322949	115	-185					67	
N 1667	4045240733532	108	-129					33	
N 1686	4047230734349	95	-255					-126	N7785
N 1687	404723 734349	95	-130					-113	N5576
N 1715	4049080734109	101	-419					-165	N5576
								-118	N2030
N 1716	4049110734111	101	-412					-115	
N 1742	4039180733504	20	-252					-37	
N 1744	4039220734017	20	-57					-50	
N 1771	4047430734034	212	-158					-149	
N 1793	404338 733307	91	-209					38	
N 1802	4045120734210	132	-618					9	
N 1804	404528 734149	119	-137					1	
N 1805	4054270733112	15	-337					-142	
N 1818	404532 734209	141	-94					21	
N 1819	4045140734150	117	-167					9	
N 1825	4047560733732	200	-167					82	
N 1835	404519 734210	122	-148					1	
N 1841	4045150734159	118	-141					8	
N 1869	4038470733302	10	-122					-42	
N 1877	4048100733912	20	-535					26	
								-240	
N 1917	4051380733824	15	-292					-150	
N 1922	4045230732947	125	-66					63	
N 1926	404841 734533	51	-235					-121	
N 1927	4035210733819	10	-1461	-89				-859	
N 1939	4053140733155	5	-374					-169	
								-332	
N 1940	4053000733250	20	-460					-190	
N 1958	404426 734148	116	-641					16	
N 2002	4049380733850	18	-454					-15	
N 2006	4041100734003	45	-18					-14	
N 2017	4053110733200	10	-385					-159	
								-325	

N 2025	4053530733114	23	-378		-192	-372
N 2028	4047310734007	254	-356	59	-237	
N 2030	4049070734109	102	-263	-113	-161	-256
N 2035	4047370734117	141	-4	74		
N 2052	4048290733953	159	-249	-34	-208	N5228
N 2064	4039390732912	5	-66	-59		
N 2087	4051450733820	50	-295	-174	-242	N6549
N 2088	4052090732844	159	-446	-35	-439	N5228
N 2092	4048290733951	158	-121			
N 2113	4053090733137	10	-439	-190	-350	
N 2132	4053370733015	10	-459			
N 2169	4046480734215	58	-182	-61	-182	
N 2201	4045180733427	115	-487	65	-445	
N 2203	403806 734412	5	-177	-158	-396	
N 2214	404826 734504	47	-245			
N 2225	4039200732555	5	-169	-49	-173	N8497
N 2236	4045190733427	115	-455	-70	-89	
N 2241	4053250733151	18	-358	65	-445	
N 2269	4049160734116	110	-155	-125	-341	
N 2349	4042050733235	55	-51	-5		
N 2359	4039060732829	5	-58	-44	-49	
N 2400	4047100733804	166	-321	61	-311	
N 2422	4044410733651	93	-17	68		N7186
N 2424	4049350733849	16	-445	-40	-218	
N 2487	4045460733902	135	-299	-20		
N 2527	4044430733651	94	-24	69		N7186
N 2528	4050010733432	92	-251	-195	-204	
N 2560	4054450733105	15	-402	-140	-302	
N 2566	4045430734047	173	38	38		
N 2570	4048110733916	51	1	32		N2571
N 2571	4048110733914	42	-25	6		
N 2572	4037310733835	5	-95	-48	-92	
N 2574	4039510733615	20	-524	-42	-434	
N 2578	404033 734312	25	-478	-57		
N 2580	4043230733145	75	-1	0		
N 2597	403532 734034	6	-1246	-103	-117	
N 2602	4045160733434	114	-744	-137	-786	-945
N 2747	4044460733650	92	-325	-39	-476	-635
N 2748	4044450733651	94	-457	11		N2748
N 2749	404751 734405	56	-389	60	-453	
				-194	-260	-342

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARIT MON JAMECO GRAVEL AQUIFER UNIT	LLYOD AQUIFER UNIT	BED-ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	GREEN SAND	MAGOOTHY CONF.						
N 2790	4038050733953	3	-882				-85	-684	-853		N7889	20FT -37
N 2921	4036450733850	8	-112	-57			-104					
N 3078	4037050733906	5	-141	-57			-99					
N 3147	4045460732841	121	-129				63					
N 3154	4044430733648	91	19				56					
N 3185	4044160733847	106	-393				-3					
N 3193	4043390733040	85	-235				11					
N 3245	4039140732645	5	-210	-55			-66					
N 3312	4043100733029	70	-237				7					
N 3325	4037420733433	5	-115				-63					
N 3327	404033 734312	25	-545				-67	-432				
N 3355	4046180732704	183	-1085				17	-604	-775			
N 3443	404815 734345	124	-347				-32	-136	-256	-339		
N 3444	4048450733441	263	-197				158					
N 3448	403511 734150	7	-1243	-83			-123	-715	-990			
N 3456	4043020733325	77	-552				17					
N 3465	4043050733331	80	-482				10					
N 3474	4048470733440	244	-395				107	-325				
N 3475	4048490733445	208	-279				44					
N 3479	4041170732944	30	-42				-31					
N 3484	4045290733514	106	-59				77					
N 3488	4044450733104	117	-234				29					
N 3494	4044000733147	97	-553				2					
N 3519	4040300733416	19	-600				-33	-519				
N 3520	4041120733932	30	-445				-32					
N 3521	4048230734148	49	-367				-154	-169	-272			
N 3523	4048140734112	201	-383				-138	-199	-336			
N 3529	4035200733932	10	-96				-94					
N 3569	4047510733045	181	-221				93					
N 3581	4037410733912	8	-49				-48					

N 3603	40442480734021	75	-458	-31	-427
N 3605	40441530734102	48	-537	-44	-476
N 3618	40443400733047	88	-332	12	
N 3636	40420907333735	50	-306	-13	
N 3649	40444607337004	107	-197	23	
					20FT -17
N 3668	40441500733729	55	-511	-30	
N 3672	4044590734021	105	-376	-15	
N 3685	4044240733742	55	-95	-1	
N 3700	4044480733705	106	33	38	
N 3704	40441300733831	55	-145	-39	
					20FT -30
N 3705	403824 734159	24	-166	-49	
N 3719	40441120734041	33	-553		
N 3720	40441120734041	35	-551		
N 3721	4044440733548	40	-61		
N 3732	4044440733839	140	-310		
					20FT -49
N 3733	40446280733831	141	-314		
N 3734	403711 734443	12	-130		
N 3741	4039130734020	20	-102		
N 3742	4048420734044	140	-125		
N 3752	4048230733805	211	-52	2	
					N5708
N 3758	4044350733718	110	10		
N 3781	4040300734145	19	-561		
N 3801	4047260734355	85	-100		
N 3838	4047590733115	195	32		
N 3851	404727 734355	82	-105		
					20FT -32
N 3857	40443530732910	91	-601		
N 3860	4047450733059	183	-262		
N 3861	403751 734401	5	-616		
N 3862	403621 734418	8	-787		
N 3863	4035170734307	11	-206		
					20FT -36
N 3864	403827 734250	4	-632		
N 3865	4037350733748	4	-846		
N 3866	403816 734142	6	-446		
N 3867	403912 734320	6	-543		
N 3874	4047450733059	183	-152		
					20FT -36,-51
N 3876	4043520732911	90	-316		
N 3877	4046280733237	152	-403		
N 3878	4046240733233	150	-456		
N 3881	4043200734025	80	-414		
N 3888	4049480734126	108	-294		
					-260

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARITAN GARDINERS CLAY	MON JAMECO GREEN SAND AQUIFER	LLOYD CONF MAGOTHY SAND AQUIFER	BED-ROCK AQUIFER	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM										
N 3892	4052330733724	145	-300							-171	-234	N5261	20FT -10
N 3894	4040590733417	30	-385							-27			
N 3895	4041190733231	40	-463							-51		N8976	
N 3905	404544734151	134	-636							41	-431	-611	N4243
N 3926	4037250734304	14	-101	-55									20FT -19
N 3937	4039570734017	25	-652							-29	-592		
N 3963	4046280733237	152	-362							23			
N 3982	4053150733342	20	-399							-149	-311		
N 4077	404324734139	85	-453							PRES	-351		
N 4095	4046380732807	150	-377							76			
N 4097	4046310732939	158	-312							112			
N 4120	4040430734104	35	-423							-40			20FT -25
N 4128	4047330734146	137	-43							16			
N 4133	404890733034	192	-253							-2			
N 4149	4039050733242	5	-873							-44	-764		
N 4150	4038430733407	7	-819							-44	-745		
N 4173	404528734159	130	-130							12			
N 4206	4045240733632	106	-254							47			
N 4207	4045170734154	120	-125							18			20FT -33
N 4215	4046330733759	132	28							36			20FT -29
N 4223	4048550734034	192	-318							-148	-194	-311	
N 4243	404541734152	132	-128							41			
N 4245	4047460733211	222	-349							72			
N 4246	4048020733128	200	-258							40			
N 4265	4047550733724	215	-275							19			
N 4266	404752734403	57	-419							-155	-233	-348	
N 4327	4046210733923	127	-303							36	-303		
N 4332	4047560733940	189	-21							113			
N 4334	4042110733832	65	-96							-13			
N 4378	4054450733112	58	-309							-110	-242		

N 4382	4045220733437	114	-106	54
N 4383	4045270733354	124	-12	82
N 4388	4046460734403	28	-117	-26
N 4390	4045140734121	124	-177	9
N 4400	4051540732958	36	-364	-177
N 4401	4041530732622	37	-684	-57
N 4405	403515 734305	9	-1108	-141
N 4411	4039200734049	17	-551	-58
N 4425	4042590733715	60	-315	0
N 4432	4051430733821	28	-324	-120
N 4440	4051350733829	16	-300	-58
N 4461	4040510732948	25	-617	-119
N 4462	4050100733849	69	-202	-234
N 4512	4040580734108	35	-487	PRES
N 4623	4047220733948	257	-246	-28
N 4633	4047210733322	176	-132	-470
N 4714	403802 734444	25	-228	-244
N 4756	4042060733452	61	-847	67
N 4772	4044370733743	109	-129	-272
N 4859	4050100734142	30	-369	N8837
N 4875	4037490734236	176	-150	N9173
N 5007	4045520733420	119	-123	N6701
N 5058	4048480733407	238	-17	20FT
N 5071	4052130733655	143	-99	-353
N 5074	4047000734350	81	-39	-15
N 5076	404238 734203	71	-392	19
N 5079	4037420734052	15	-138	VEATCH 272
N 5099	404647 734236	189	-245	20FT
N 5110	404629 734213	82	-324	-119
N 5121	4039580734103	26	-521	-178
N 5129	4036060733030	9	-1094	-18
N 5135	4047320734304	135	-29	-338
N 5145	4040310734310	30	-474	N9792
N 5149	4045560733046	147	-45	PRES
N 5153	4039420733644	25	-330	PRES
N 5187	4040410733438	35	-579	-292
N 5188	4053500733124	22	-353	-376
N 5193	4039290733821	27	-528	-292
N 5194	4039230733922	16	-504	-336
N 5201	4049260733817	48	-461	-376

N 5696	4039450733415	20	-545	-35										
N 5705	4045380732652	145	-368	95										
N 5708	4048240733896	211	-32	-3										
N 5710	40455907334155	179	-211	59										
N 5731	403944 734319	15	-87	-58										
N 5762	4051290733615	145	-165	-19										
N 5768	403B210733739	5	-845	-127										
N 5777	4039400732930	5	-78	-62										
N 5851	4047140733420	218	41	90										
N 5852	4048080733746	235	-282	50										
N 5876	4048580734115	100	-195	-118										
N 5883	4048200733814	208	-7	6										
N 5884	404756 734258	68	-160	36										
N 5901	4047310733105	179	31	103										
N 5906	4038330733555	10	-101	-42										
N 5947	4046460733908	129	-375	80										
N 5994	4052110733718	130	-110	25										
N 6034	4047430734022	210	-97	-17										
N 6035	4047450734012	198	-96	81										
N 6046	4044170733551	101	-255	39										
N 6082	4039130732920	6	-82	-48										
N 6073	4045110734128	120	14	14										
N 6076	4046500732911	168	-536	86										
N 6077	4046490732910	158	-534	86										
N 6092	4049120732751	241	-396	191										
N 6093	4049080732751	240	-366	141										
N 6119	4046090733929	123	-58	41										
N 6148	4042160732733	50	-516	-40										
N 6149	4042120732621	47	-670	-48										
N 6150	4042450732903	59	-645	-20										
N 6190	4047070733053	177	-465	-41										
N 6191	4047070733049	180	-496	-1										
N 6192	4045160733100	127	-530	25										
N 6193	4045170733105	130	-607	26										
N 6202	4045490733305	132	-132	37										
N 6205	4044250733813	107	-161	4										
N 6224	4054390733048	30	-322	-115										
N 6282	4051250734207	102	-340	-278										
N 6289	4051220733517	162	-223	-220										
N 6312	4054380733120	38	-302	-256										

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL-IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOOTHY AQUIFER		
N 5227	4035320733533	10	-1278	-39		-87	-899	-1089	N6850 20FT -39
N 5228	4048290733951	158	-176	-537	-49	-35			20FT -28
N 5233	4035220733621	12	-537	-463		-78			20FT -27
N 5260	4041330733834	55	-157			-41			
N 5261	4052330733722	145				-105			
N 5292	4038050733453	5	-87			-48			
N 5301	4044280733152	107	-397			27			
N 5302	4042460733143	65	-425			-49			
N 5303	4042530733006	60	-455			-7			
N 5304	4042250733043	55	-448			-35			
N 5308	4035190733828	8	-1240	-102		-142	-840	-1020	
N 5335	4047130733145	170	26			112			
N 5336	4044410733207	114	-556			21	-542		
N 5357	4049370734420	20	-263						-263
N 5368	4045260733015	130	-20			44			
N 5484	4044190733644	90	-489			30	-480		
N 5485	4044230733655	92	-465			21	-459		
N 5486	4044150733655	89	-934			39	-470	-630	
N 5524	4038260734429	5	-139	-92	-126				
N 5528	4047280734005	257	-258			62	-238		
N 5530	4049420734144	65	-371						
N 5535	4046180734141	250	-185			49			
N 5576	404722734348	95	-171			29	-110		
N 5598	4044530733725	106	-362			20			
N 5603	4045170734023	114	-338			55	-303		
N 5621	4048570734115	100	-180			-117	-169		
N 5654	4044510733526	102	-233			54			
N 5655	4045410733335	130	-130				44		
N 5677	4048410733047	218	-211				139		
N 5695	4039220733543	24	-505				-34		

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOOTHY AQUIFER	LLOYD UNIT AQUIFER	
N 6315	4045260733626	104	-251						41
N 6334	4044540734104	128	-80						24
N 6354	4037120733008	10	-104	-57					-94
N 6355	4036440733305	5	-125	-52					-65
N 6376	4046330732706	200	-47						72
N 6383	4041230732852	31	-653						-31
N 6394	4047460734010	190	-27						116
N 6395	4047470734010	190	-18						115
N 6416	4051330733818	15	-280						-150
N 6436	4053280733126	58	-380						-307
N 6437	4042690733821	65	-226						-14
N 6442	4041230732853	31	-581						-42
N 6444	4050310733535	170	-87						80
N 6450	4035330734011	10	-1321						-97
N 6455	4039420734245	15	-69						-46
N 6467	403810 734331	4	-694	-55	-132				-191
N 6468	403840 734330	5	-699	-52	-134				-571
N 6469	403810 734313	6	-597	-66	-131				-230
N 6510	403842 734333	10	-453	-88	-155				-150
N 6549	4051440733824	32	-409						-154
N 6578	4054330733122	20	-311						-177
N 6580	4046300732937	160	-542						-223
N 6581	403827 734250	8	-612	-61	-131				-404
N 6810	403841 734331	9	-235	-79	-100				-121
N 6623	4039070733532	20	-118						-52
N 6631	4043440732841	87	-500						23
N 6636	4043190732656	60	-140						-30
N 6644	40441000732710	90	-148						14
N 6651	4047540733157	225	-395						62
N 6655	4045340733244	122	-114						57

N	6657	4036310732552	5	-406	-53	-84	-179	20FT	-46
N	6660	4039180733639	15	-73	-25	-25	-431	20FT	-22
N	6675	4053330733032	7	-453	42	42	-149	20FT	-33
N	6691	4046460733657	145	42	-77	-133	-716	20FT	-21
N	6701	403517734306	11	-846	-66	-46	-51	20FT	-21
N	6706	403713734159	6	-737	-68	-125	-155	20FT	-19
N	6721	4046570733819	148	29	-228	-550	30	20FT	-33
N	6741	4047510733045	180	-243	-132	-678	67	20FT	-21
N	6757	4036550733248	5	-66	-73	-50	-51	20FT	-21
N	6791	4037280733930	5	-169	-169	-169	69	20FT	-28
N	6806	4050260733616	154	-228	-228	-228	-69	20FT	-28
N	6813	4039360734309	10	-550	-550	-550	-64	20FT	-28
N	6817	4039300733817	28	-132	-132	-132	34	20FT	-28
N	6819	4045370733335	130	-678	-678	-678	-48	20FT	-28
N	6834	4040390732836	25	-214	-214	-214	-11	20FT	-28
N	6842	4044420733610	104	-54	-54	-54	40	20FT	-28
N	6848	4044450733326	110	-2	-2	-2	2	20FT	-28
N	6850	4035330733532	7	-1043	-1043	-1043	-87	20FT	-28
N	6865	4044330734025	87	-214	-214	-214	-908	20FT	-28
N	6866	4040390732835	26	-600	-600	-600	PRES	20FT	-28
N	6873	405310733114	30	-360	-360	-360	-176	20FT	-28
N	6893	4040490733543	40	-524	-524	-524	-15	20FT	-28
N	6904	4043390733040	91	-602	-602	-602	18	20FT	-28
N	6907	4046360733641	138	4	4	4	55	20FT	-28
N	6915	4044010732832	90	-496	-496	-496	36	20FT	-28
N	6916	4043580732831	91	-522	-522	-522	48	20FT	-28
N	6918	4044330734027	87	-216	-216	-216	2	20FT	-28
N	6925	404750734446	11	-274	-274	-274	-159	20FT	-28
N	6928	4038050733953	6	-852	-852	-852	-85	20FT	-28
N	6945	4045470734011	154	-360	-360	-360	-685	20FT	-28
N	6956	4045570732705	170	-484	-484	-484	38	20FT	-28
N	6985	4037570734039	5	-132	-132	-132	-343	20FT	-28
N	6992	404760734400	78	-48	-48	-48	-343	20FT	-28
N	6992	4040510732721	24	-87	-87	-87	-343	20FT	-28
N	6996	4045280733040	132	12	12	12	21	20FT	-28
N	7022	4042000733500	60	-4	-4	-4	-4	20FT	-28
N	7030	4046370733305	160	-378	-378	-378	-3	20FT	-28
N	7045	4047290733423	241	90	90	90	91	20FT	-28
N	7047	4051530733326	223	-41	-41	-41	83	20FT	-28
N	7053	4046280734058	209	-77	-77	-77	72	20FT	-28
N	7076	4043390733040	91	-583	-583	-583	20	20FT	-28
N	7087	4047060734337	98	-105	-105	-105	-13	20FT	-28
N	7104	4048320733722	158	-314	-314	-314	68	20FT	-28
N	7114	4037530733736	9	-193	-193	-193	-39	20FT	-28
N	7115	4050290733317	205	-69	-69	-69	-10	20FT	-28

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARI	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOOTHY CONF AQUIFER	LLOYD UNIT AQUIFER	BED-ROCK	
N 7117	4042220734047	60	-431					-26		
N 7124	4043510732647	70	-85					-22		
N 7126	4046520734007	193	-636					113	-275	-429
N 7133	4037490734116	9	-141					-126	-239	-628
N 7152	4054330733446	14	-395							N7892
N 7160	4041560733448	60	-639							
N 7161	4038560733925	10	-690							
N 7186	4044110733650	92	-230							
N 7298	4043030733714	61	-526							
N 7334	4045140734121	120	-362							
N 7336	4046510733647	144	21							
N 7353	4045520733416	120	-295							
N 7377	4043130732750	65	-701							
N 7399	4046520734226	126	-74							
N 7407	4040020733332	24	-624							
N 7414	4040540732613	22	-597							
N 7419	4049050732852	243	-82							
N 7420	4048030732806	283	18							
N 7430	4040100734252	20	-530							
N 7433	4040050733429	25	-70							
N 7438	4044260732743	127	-523							
N 7439	4052590733850	22	-190							
N 7445	404515 734122	120	-333							
N 7446	4048480733443	222	-276							
N 7450	4048550733601	176	42							
N 7469	4039220733904	20	-258							
N 7482	4041080734329	35	-425							
N 7486	4054120733112	25	-335							
N 7487	4042120734239	50	-78							
N 7500	4044180733454	90	-384							

N 7503	4043380732708	60	-605							-20	-208	-265							
N 7510	4054440733131	19	-310							28									
N 7512	4045360734103	123	-257							4									
N 7513	4046520733727	154	-321							PRES									
N 7516	4043370732705	63	-526																
N 7518	4045330732937	133	-327							72									
N 7521	4039480733928	13	-559							-65									
N 7522	4040010733913	25	-612							-55									
N 7523	4043090733026	76	-608							16									
N 7524	4044250733805	106	-174							33									
N 7525	4054050733112	32	-385							90									
N 7526	4047040732803	210	-484							-17									
N 7529	4041550733802	45	-27							-17									
N 7546	4054180733240	11	-353							-310									
N 7547	4054300733528	9	-313							-261									
N 7548	40400070734250	20	-487							-61									
N 7549	4047380733541	198	-306							155									
N 7551	4046560733946	162	-443							79									
N 7552	4046490733944	143	-455							101									
N 7553	4046520733946	153	-305							111									
N 7554	4047050733949	190	-310							99									
N 7560	4045070734202	150	-92							38									
N 7562	4046340733112	160	-523							-18									
N 7570	40542407333400	125	-397							-251									
N 7581	4046400733814	123	30							31									
N 7593	4050450732830	253	-220							66									
N 7613	404814 734518	38	-197																
N 7614	4051450733815	32	-361																
N 7620	4051420733400	125	-355																
N 7644	4054210733052	19	-301																
N 7651	4046110734010	182	-411							28									
N 7683	4039510732724	6	-171							-54									
N 7686	4046110734010	162	-363							28									
N 7719	405420733429	20	-380																
N 7720	4042370734007	70	-493																
N 7731	4046120734006	167	18																
N 7732	4045170733339	121	13																
N 7764	4042210733537	60	-186																
N 7770	404827 734454	43	-267																
N 7772	4050120733102	258	-310																

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARIT INERS	NON JAMECO SAND	GREEN MAGOTHY AQUIFER	CONF LLOYD	BED- ROCK	LOCATED NEAR WELL	REMARKS	
		TOP	BOTTOM	GARD- CLAY	GRAVEL										
N 7773	4050100733059	230	-335											-136	
N 7776	4035370733940	5	-1233											-123	-817 -980
N 7781	4047510733220	217	-333											91	
N 7782	4051420733714	95	-133											24	-133
N 7785	4045260733534	108	-296											54	
N 7795	4040230733709	40	-720											-23	-665
N 7796	4039490733417	11	-689											-51	
N 7830	4051110733258	118	-79											83	
N 7849	4044230733806	106	-145											23	
N 7852	4044110732616	75	-540											-23	
N 7854	4040350734035	35	-637											-18	-587
N 7855	4040400734036	37	-568											-16	
N 7857	4050590733841	195	-432												-51
N 7858	4048110733321	218	-157											33	
N 7873	4048110733633	253	-282											135	
N 7884	4038030733953	7	-736											-54	-685
N 7885	4038030733954	7	-725											-47	
N 7886	4038030733954	7	-595											-41	
N 7887	4038030733954	7	-538											-43	
N 7889	4038020733954	7	-595											-45	
N 7892	4046510734009	200	-265											101	-252
N 7936	4046360733641	138	-5											70	
N 7957	4044190733531	98	-527											30	-488
N 7980	4047160733711	161	6											60	
N 8004	4043450732840	85	-663											30	-654
N 8007	4045430733549	120	-458											64	-450
N 8008	4039130733211	10	-383											-51	
N 8010	4047390733921	225	-228											131	-224
N 8031	4040390733115	25	-498											-39	
N 8037	4043590733146	97	-587											1	N8321

20FT -30

N	8038	4045450734255	210	-85	104	132	-484	-240	
N	8043	4047540732831	222	-499			-184	-240	
N	8048	4051520733819	60	-310			-250	-331	N8608
N	8095	4049140733924	35	-365			-258	-347	N8608
N	8096	4049170733924	27	-383					
					20FT	-28			
N	8109	4038440734233	5	-148	-52	-147			
N	8123	4050490733035	263	-63			20FT	-33	
N	8162	4039040733134	10	-144	-42	41	20FT	-35	
N	8163	4046050734001	156	5		-51			
N	8171	4038560733338	10	-373		81			
					-40				
N	8181	4046160733545	141	-99			12		
N	8188	4037180733343	12	-150	-58	-63			
N	8195	4039340734107	20	-683		-52	-585		
N	8196	4039520733616	24	-682		-30	-636		
N	8211	4045280734129	120	-105		29			N8568
N	8214	4041560732620	37	-663		-30			N9173
N	8216	4040000733710	30	-635		-11			
N	8217	4040040733710	36	-669		-17	-646		
N	8221	404922734500	75	-215			-155		
N	8233	4035180733820	8	-1223	PRES	-146	-893	-1042	
N	8248	4045250733825	120	-398		15	-398		
N	8249	4046320733111	163	-332		-27			
N	8250	4041190733716	50	-643		-20	-551		
N	8251	40395907334104	25	-660		-49	-530		
N	8253	4040030733334	25	-675		-40			
N	8255	4046560734224	105	-195		-59	-185		
N	8267	4045050734205	125	-160		30			N8456
N	8277	4044190733830	103	-258		7			
N	8319	4039490734325	15	-165		-35			
N	8321	4044000733147	97	-577	PRES				
N	8326	4051160733729	53	-454			-304		N8327
N	8327	4051130733726	53	-369			-304		
N	8342	404642734405	18	-425		-81	-179	-421	N9110
N	8343	4052160733723	138	-282		-4	-96	-239	N8394
N	8344	4039310734310	10	-50	-48				
N	8354	4035220733700	5	-1270	-61	-87	-866	-1095	
N	8355	4048290733159	258	-337		136			
N	8358	4045300734144	119	-336		23	-262		N8373
N	8363	4042170732904	56	-544		-30			N8665
N	8369	4046320733011	160	-35		71			

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARI	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND AQUIFER	LLOYD CONF AQUIFER			
N 8372	4045290734146	119	-229				6			N8373
N 8373	4045290734146	119	-231				16			
N 8375	404654 734223	110	-454				-66	-174	-325	N8456
N 8390	4040520734216	45	-38				-25			
N 8394	4052170733721	138	-455				11	-105	-251	-444
N 8409	4044200733939	98	-309				-8			
N 8413	404500734253	39	-96				-24	-96		
N 8414	4035580733027	7	-1073	-58			-85	-113	-993	N9338
N 8415	4042280732933	58	-660				-32			
N 8423	4043150733336	76	-16				58			
N 8431	4046540734357	68	-28				-26			
N 8432	4048570733521	165	-85				102			
N 8455	4049400734446	55	-224				-73	-182	-342	-205
N 8456	404658 734226	105	-519				35			-510
N 8457	4044560733607	105	-335							
N 8466	4038030734142	11	-463	-69			-129			
N 8472	4045310733332	126	-70				36			
N 8477	4047520733953	188	-565				112	-252	-398	-550
N 8480	4042290732934	58	-661				32			
N 8481	4037570733817	8	-72				-47			
N 8482	4038420733808	16	-66				-52			
N 8487	4041260733052	35	-35				-17			
N 8497	4045190733429	115	-489				66	-445		
N 8499	4045380734127	140	-130				23			
N 8514	4039000732929	5	-245	-45			-61			
N 8516	4045310734126	130	-125				38			N8568
N 8520	4040510732603	21	-913				-64	-906		N8603
N 8543	4045280733514	106	-54				66			
N 8557	4035220734108	9	-1286	-71			-127	-772	-971	
N 8558	4046310733832	142	-373				7	-351		

N 8564	4046380734124	148	-172	42
N 8565	4045310734126	130	-130	35
N 8566	4045310734126	130	-120	36
N 8567	4045310734126	130	-120	38
N 8568	4045310734126	130	-111	34
N 8569	4047480733955	195	-550	125
N 8570	4044530733834	112	-439	-241
N 8571	4049170733924	27	-397	-393
N 8572	4048150732946	194	17	-2
N 8573	4050110733948	15	-362	115
N 8574	4045540732703	182	-439	115
N 8601	4045050733454	104	-236	52
N 8603	4040610732603	22	-871	PRES
N 8608	4049170733924	27	-397	-273
N 8624	4050110733948	15	-362	-331
N 8642	4047270733456	243	-157	-340
N 8657	4039250733547	23	-617	57
N 8658	4048190733433	325	-345	-21
N 8664	4042170732904	56	-525	-30
N 8665	4042170732902	57	-553	-43
N 8668	4045410732650	141	-362	96
N 8672	4041330733119	35	-728	-15
N 8678	4046000734124	183	-412	246
N 8681	4049530733302	200	-170	-30
N 8690	4051340733843	25	-322	-43
N 8709	4051320733845	22	-290	96
N 8713	4049200733733	168	-244	-15
N 8761	4048420734044	140	-134	-218
N 8767	4045320732849	124	-521	-218
N 8768	4045330732848	124	-559	-218
N 8776	4054230733353	98	-361	-22
N 8790	4048560734123	76	-367	-235
N 8799	4045390733742	111	-119	-161
N 8801	4045270734222	147	-133	-161
N 8803	4045250734225	146	-132	-161
N 8805	4053230733131	63	-394	-161
N 8807	4045430733246	118	-32	-161
N 8818	4042110734056	55	-447	-294
N 8821	404533734154	133	-107	-266
N 8829	4042160733710	60	-8	-266
N 8830	4041480733747	40	-52	-266
N 8837	4040520732946	20	-661	-266

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARI	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN MAGOTHY CONF AQUIFER	LLOYD BED-ROCK			
N 8840	404532 734151	122	-118				22			
N 8842	4044380732953	111	-543				5			
N 8858	4035590734341	10	-94	-88						20FT -29
N 8873	4039150732708	7	-200	-54			-74			
N 8880	4045340733244	122	-125				52			
N 8881	4040240733742	40	-31				-5			
N 8885	4047400733608	196	-102				106			
N 8896	4040380734309	30	-67				-58			
N 8898	40449410733845	18	-205				-134			
N 8935	4039450734258	15	-351				-52			
N 8941	4043530732910	91	-720				19			
N 8956	4045080733336	115	-477				20			
N 8962	4054210733548	6	-422							
N 8964	404635 734356	47	-188				-143			
N 8976	4041190733231	38	-735				-48			
N 8988	4039280733841	26	-84	-38			-65			
N 8994	4051530734206	21	-287							
N 8995	4053570733109	41	-364				-140			
N 9019	4048530733959	46	-365				-156			
N 9024	4044440733712	94	24				-223			
N 9025	4044440733712	94	32				40			
N 9026	4044450733712	94	24							
N 9027	4044450733712	94	34							
N 9062	4045270733354	124	-19							
N 9068	4052040733634	143	-508				5			
N 9084	404357 733317	96	-47							
N 9085	404415 733308	102	8							
N 9110	404640 734410	15	-371							
N 9151	404224 734238	50	-386							
N 9170	4047540733039	184	-369							

N 9173	4041540732620	38	-846																
N 9178	4042050733500	62	-584																
N 9180	4045170733102	130	-570																
N 9182	404407 733315	101	-96																
N 9193	404404 733304	100	-96																
N 9196	404404 733253	99	-108																
N 9202	404357 733316	98	-3																
N 9203	404402 733315	100	-1																
N 9204	404407 733314	101	0																
N 9205	404412 733313	103	2																
N 9206	404415 733307	104	-33																
N 9210	4052020733633	142	-133																
N 9211	4052050733634	142	-127																
N 9212	404453 733246	117	-713																
N 9219	404353 733318	96	0																
N 9223	404346 733320	93	-6																
N 9234	4044300733310	105	-100																
N 9247	404345 733243	93	-3																
N 9252	404331 733247	89	-107																
N 9308	404735 734240	12	-431																
N 9318	4041530733512	55	-407																
N 9334	4051280733705	143	-488																
N 9338	404280732935	58	-588																
N 9360	404410 733312	102	-104																
N 9367	404401 733248	101	-5																
N 9463	40461010733150	141	-497																
N 9464	4054390733045	22	-308																
N 9488	4046280733112	161	-477																
N 9489	4049120733235	225	27																
N 9514	4041310733114	30	-650																
N 9520	4051440733135	90	-466																
N 9521	4044110733610	90	-540																
N 9523	4039270734111	20	-118																
N 9532	4039480734218	10	-130																
N 9533	4037520734123	10	-135																
N 9534	4039270733915	20	-65																
N 9535	4037310733817	5	-100																
N 9536	4037470733718	5	-75																
N 9537	4039380733711	28	-40																
N 9538	4039260733605	10	-135																

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				LOCATED NEAR WELL	REMARKS	
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND	RARITAN AQUIFER	LLOYD UNIT	BEDROCK	
N 9539	4037426733635	6	-54					-46		20FT -30
N 9541	4041380733439	28	-77					-12		
N 9550	4039300733409	15	-110					-75		20FT -25
N 9551	4038080733343	10	-85					-52		20FT -38
N 9552	4040110733057	15	-80	-49				-57		20FT -35
N 9553	4038280733032	5	-80					-61		
N 9554	4041050732742	20	-80	-42				-52		20FT -30
N 9556	4040300732933	20	-135					-45		20FT -35
N 9565	4041240732915	40	-60					-48		
N 9567	4038460734029	25	-115	-43				-63		
N 9576	4040510732633	15	-60					-58		
N 9577	40411590732707	25	-55					-45		20FT -27
N 9579	4042180734019	55	-130					-25		
N 9591	4045240732826	121	-579					83	-568	
N 9593	4054100733120	5	-365					-135	-295	
N 9595	40530000733250	20	-447					-137	-306	
N 9683	4039560733517	25	-40					-25		
N 9684	404010733306	20	-50					-40		20FT -25
N 9685	4039590733132	15	-65					-49		20FT -25
N 9696	4048150732946	194	106					124		
N 9697	404130732730	180	51					104		
N 9699	4051240732926	67	20					33		
N 9708	4054260733119	12	-375					-143	-300	
N 9792	4039300733829	31	-531	-37				-102	PRES	20FT -23
N 9809	4048380734042	115	-488						-485	
N 9846	404412733510	85	-530					47	-510	
N 9965	4044130733307	92	37					46		
N 9977		173	-43					-43		
N 9978		173	-73					-41		
N10019	404407733704	87	-213					27		

N10020	4044008	733857	83	-207	31								
N10033	404259	733806	74	-544	10	-504							
N10034	404258	733806	74	-526	4	-504							
N10038	404404	733346	95	-553	-20								
N10039	404354	733343	93	-571	-43								
N10040	404344	733356	90	-554	-61								
N10041	404336	733509	77	-571	27	-518							
N10042	404330	733530	83	-588	35	-541							
N10043	404418	733616	78	-118	10								
N10100	404844	734408	35	-270	-255								
S 3	404503	732548	97	-191	62								
S 12	4037130732307		7	-308	-83								
S 13	404210	732159	30	-340	-54								
S 15	4042240732237		40	-61	-38								
S 16	4041060732525		20	-109	-52								
S 17	4043426732146		50	-76	-43	-47							
S 18	4045120732142		58	-344	18	-18							
S 19	404500731942		130	-73	-54								
S 24	4047520732013		150	18	131	PRES							
S 34	405530	732241	5	-1645		PRES							
S 37	4043150731808		33	-787	-65								
S 38	404318	731702	32	-168	-63								
S 40	403834	730941	15	-380	-304								
S 42	4047310731647		120	-888	-38	-706							
S 45	404940	731652	160	31									
S 48	405329	731843	123	-817	-400	-572							
S 49	405327	731843	130	-822	-395	-590							
S 53	405411	731532	62	-132									
S 58	4044550731307		38	-430	-88								
S 64	405136	731251	20	-185									
S 68	405355	731436	66	-348	-175								
S 72	405342	731433	121	-379	-154								
S 74	4043080730955		10	-101	-97								
S 78	4044150732031		41	-80	-50								
S 80	404501	730529	35	-86									
S 88	4043580732047		40	-76	-43								
S 92	4045620730120		15	-165	-125								
S 94	404522	730312	35	-83									
S 95	4046310730114		26	-437	-131								
S 96	404954	730148	120	24									

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UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	TOP BOTTOM	GARDINERS CLAY	MON JAMECO GREEN SAND	RARI T LLOYD CONF	BED-ROCK UNIT AQUIFER	LOCATED NEAR WELL		REMARKS	
							HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL			
							LEVEL	LEVEL		
S 99	405034	730145	260	5						
S 105	405209	730007	95	-125						
S 106	405201	730200	95	2						
S 107	405337	730022	120	-180						
S 108	405256	730040	80	-110						
S 111	405635	730415	50	-112					28	
S 112	405715	730414	10	-235					-10	
S 114	405705	730358	5	-328					-6	
S 128	404758	725454	36	-895					-136	
S 129	404854	725008	29	-70						
S 135	405650	725034	110	9						
S 145	405538	724207	40	-51						
S 149	405754	724653	128	-46						
S 151	404824	723745	10	-336	PRES					
S 152	404730	723920	5	-265	PRES					
S 153	404720	723959	5	-264	PRES					
S 160	405437	723755	10	-170						
S 164	405423	722408	75	-48						
S 167	405628	722637	20	-600						
S 169	410251	722625	20	-70						
S 170	410251	722625	5	-163						
S 178	410630	722235	20	-35						
S 182	405737	721951	130	-29						
S 183	405750	721928	110	-83						
S 184	405912	721743	30	-510						
S 185	405941	721656	60	-40						
S 189	410745	721600	5	-663						
S 190	405756	721143	50	-26						
S 191	405916	720805	110	-20						
S 197	410509	722130	18	-9						
				-260						
				-387	-487	-612				

S	198	410450	722120	26	-4
S	199	410446	722118	9	-7
S	208	404846	732608	360	205
S	236	404334	732352	60	-32
S	266	405506	732412	10	-330
S	267	405602	732243	5	-345
S	291	404458	731430	40	-62
S	296	404504	731231	28	-13
S	302	404628	731432	80	28
S	308	405128	731259	60	-108
S	317	405301	731147	120	-92
S	318	405414	731304	10	-136
S	320	405403	731104	60	-57
S	351	405423	730904	100	-60
S	357	405548	730644	80	-172
S	360	405657	730643	40	-280
S	368	405814	730524	10	-155
S	375	40482207	730557	25	-115
S	397	405638	730412	50	-46
S	407	405706	730338	200	-170
S	421	405652	725354	135	-212
S	422	405743	725434	20	-74
S	455	404813	723648	5	-220
S	456	404847	723627	10	-237
S	490	410559	722150	16	-674
S	492	410822	722114	40	-10
S	495	405604	721820	30	-270
S	518	410505	722624	75	-21
S	527	405746	724308	100	-33
S	539	405154	730605	98	41
S	552	405721	724434	105	-8
S	569	405239	723140	45	-10
S	614	405346	722311	47	-39
S	619	405501	724326	30	-137
S	638	405603	723836	10	-79
S	644	405839	724038	150	-8
S	651	404848	732544	310	36
S	657	405302	725855	90	36
S	660	405007	730525	180	35
S	670	405443	722616	45	-45

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARIT	MON	GREEN	MAGOOTHY	CONF	LLOYD	BED-ROCK	LOCATED NEAR WELL	REMARKS	
		TOP	BOTTOM	GARD- INERS	JAMECO GRAVEL	AQUIFER	UNIT										
S 681	405606	723618	10	-245													
S 716	405612	723856	10	-213													
S 731	404455073234	8	85	-44													
S 759	404953	732624	140	6													
S 777	405049	730210	240	5													
S 796	405751	724745	105	-55													
S 848	405714	732349	59	-21													
S 852	405157	731123	135	-8													
S 853	405736	725943	130	-15													
S 911	404904	724945	45	-19													
S 912	405308	731231	90	-326													
S 919	405563	730332	220	-86													
S 927	404858	732559	350	-169													
S 933	404943	725613	55	-61													
S 939	405117	725750	180	14													
S 970	405752	725832	85	-163													
S 1052	403931073244	5	-92	-55													
S 1081	405530	732330	59	-50													
S 1101	405718	721250	40	-23													
S 1102	410311	722827	10	-64													
S 1216	406743	724259	95	-19													
S 1250	410605	722142	9	-61													
S 1264	404457	724836	5	-296													
S 1296	4049070732035	240	24	PRES													
S 1318	405127	723017	15	-35													
S 1331	404551	725617	30	-30													
S 1341	405412	722328	38	-61													
S 1370	4037560731313	10	-365	-70													
S 1399	405943	720243	20	-319													
S 1407	404941	724706	85	3													

S 1497	405604	730840	10	-247		-172
S 1531	405208	724945	45	-93		
S 1569	405245	730951	160	26		
S 1592	404708	724825	10	-210	-123	-203
S 1601	405507	731834	80	-48		
S 1609	405818	724131	100	-21		
S 1610	405749	723931	70	-23		
S 1686	404840	731158	180	-3		
S 1689	405006	730247	160	45		
S 1723	404749	731610	122	-37		-37
S 1743	404712	724822	10	-219	-82	
S 1777	405716	723947	40	-50		
S 1790	405646	723856	40	-44		
S 1793	40484007	732100	320	47		
S 1801	40482607	732030	200	25		
S 1822	405654	724707	115	-32		
S 1834	40365007	732455	10	-294	-70	
S 1838	405741	724317	100	-33		
S 1842	405119	732003	205	-240		
S 1892	405821	724435	85	-15		
S 1929	405723	724446	110	-45		
S 1951	405208	732059	220	-268		
S 2010	405819	724242	140	-22		
S 2016	405656	725533	150	30		
S 2181	405745	730046	60	-286		
S 2314	40480507	732118	80	-400		66
S 2405	405722	721230	45	-43		
S 2406	405131	731114	100	-43		
S 2424	40480307	732221	4	-40		98
S 2426	405355	731155	80	-57		
S 2459	40410007	731925	10	-121	-54	
S 2486	405338	731306	60	-93		
S 2486	405109	725130	69	-6		
S 2538	405431	722347	70	15		
S 2567	405231	731420	140	-8		
S 2589	405711	721307	25	-42		
S 2570	405721	721230	45	-45		
S 2586	405755	724712	127	-19		
S 2638	404044	732143	10	-170	-49	
S 2650	405635	730129	165	-43		-120

S2570

S14940

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				LOCATED NEAR WELL	REMARKS
		LEVEL	TOP	BOTTOM	GARDINERS CLAY	MON JAMECO SAND	GREEN MAGOTHY CONF AQUIFER	LLOYD UNIT AQUIFER	
S 2653	404955 732156		180	66					
S 2654	405759 724205		98	-42					
S 2676	405940 723330		12	-47					
S 2712	410449 722650		63	-15					
S 2730	404757 732155		200	-135					
S 2747	405641 725804		140	50					
S 2752	405417 731215		50	-163					
S 2978	405322 732114		15	-256					
S 3012	405322 732114		15	-166					
S 3045	410251 722625		20	-35					
S 3087	404924 732523		220	35					
S 3123	405919 722609		8	-451					-182
S 3184	404856 732641		240	-34					115
S 3243	405116 730520		100	25					
S 3354	405357 731708		125	-108					
S 3369	405142 731302		85	-33					
S 3438	404968 730705		100	-1					
S 3462	405259 730928		165	24					
S 3468	405066 723822		45	-8					
S 3487	405841 723845		130	39					
S 3488	410122 723236		60	-30					
S 3495	404931 723202		6	-354					-219
S 3504	404423 732534		80	5					
S 3506	404946 723856		40	-62					
S 3513	405146 730318		101	36					
S 3537	405004 724238		43						
S 3539	405121 724156		79	-9					
S 3554	405714 732347		71	-35					
S 3570	405700 724207		80	-80					
S 3585	410619 720614		80	-10					

S 3599	410412	715130	40	-29		
S 3636	404350	725217	10	-367	-105	-268
S 3697	410722	722107	36	-43		
S 3698	410725	722105	38	-41		
S 3721	405537	724321	60	-30		
S 3722	405614	724035	25	-85		
S 3737	405103	730455	110	47		
S 3761	405328	731706	160	10		
S 3764	405658	723831	42	-12		
S 3765	405634	724015	30	-24		
S 3767	405718	724112	65	-9		
S 3771	404927	732241	240	45		
S 3868	405512	730606	99	-15		
S 3871	405010	725809	128	41		
S 3875	405554	724550	90	-25		
S 3941	405431	724549	60	-25		
S 3955	405343	730550	123	41		
S 3957	405521	724549	68	-47		
S 3966	405801	723254	14	-38		
S 4048	405743	724342	105	-67		
S 4080	405418	724510	50	-20		
S 4081	405946	723420	40	-77		
S 4085	405529	723822	12	-48		
S 4091	410342	722530	20	-124		
S 4105	405021	730706	92	24		
S 4126	404919	732221	170	-20		
S 4134	405534	724018	24	-201		
S 4152	405752	725657	115	-32		
S 4163	410251	722625	20	-25		
S 4184	405032	731816	143	-19		
S 4266	404630	731800	80	-45		
S 4372	405646	730416	10	-90		
S 4466	405452	732824	20	-350		
S 4475	405832	723522	55	-40		
S 4484	410245	722444	15	-36		
S 4512	405836	723547	63	-51		
S 4519	404813	731944	40	-78		
S 4532	405354	731725	150	-200		
S 4533	405527	732947	60	-82		
S 4534	404740	732029	130	10		
					S8439	
					-210	-320

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARIT GARD- INERS CLAY	MON JAMECO GREEN SAND GRAVEL	LLOYD AQUIFER UNIT	BED-ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM										
S 4571	405753 730907	15	-554										
S 4577	405808 724037	90	-10										
S 4580	410109 722902	25	-30										
S 4583	405120 731721	165	-385										
S 4594	404940 732026	200	17										
S 4615	405006 731746	130	-18										
S 4656	404605 732408	100	-41										S61671
S 4676	405832 723737	81	-16										
S 4679	404927 724401	20	-74										
S 4725	410122 723022	47	-71										
S 4761	4038420730859	5	-525										
S 4814	405503 724313	35	-116										
S 4827	405143 732154	216	17										
S 4828	405020 732206	185	44										
S 4900	405438 731715	130	-99										
S 4945	405259 731335	150	-73										
S 4949	405921 723202	20	-35										
S 4984	405541 732942	60	-110										
S 4997	404948 732246	240	48										
S 5049	405254 731306	160											
S 5134	4047560732033	175	15										
S 5140	405535 724108	30	-240										
S 5277	410509 722636	70	-29										
S 5366	405623 724030	35	-30										
S 5368	405409 731058	40	-120										
S 5463	405309 730935	162	7										
S 5476	410030 722718	15	-15										
S 5591	404450 725103	5	-301										
S 5615	405721 721955	119	-46										
S 5619	404625 724856	5	-267										

S 5670	4048380732037	230	47		184
S 5696	405556 721648	20	-22		
S 5700	405502 724119	25	-98		
S 5716	4046300732150	200	41		51
S 5719	404949 732310	200	46		
S 5755	404450 725104	5	-301	-125	-245
S 5834	404802 730638	98	-36		
S 5869	4046130732336	200	9	156	
S 5901	405701 730443	15	-876	-25	-498
S 5922	405657 730427	120	-410	-36	-595
S 5915	410156 721016	40	-36		-813
S 6100	405544 732331	30	-28		
S 6111	410543 720630	60	-43		
S 6187	4043490730209	5	-305	-148	-276
S 6193	410347 722720	15	-60		
S 6409	405132 725355	117	-1474	-178	-987
S 6410	405517 725408	109	22		-1128
S 6411	405650 725418	138	-11		-1448
S 6413	405308 725531	94	-14		
S 6420	405017 725033	65	-24		
S 6421	405025 724951	90	-1		
S 6422	405451 725005	73	-78		
S 6423	405532 725014	100	9		
S 6425	405136 725227	70	-16		
S 6426	405128 725158	69	-17		
S 6421	405025 724951	90	-1		
S 6422	405451 725005	73	-78		
S 6423	405532 725014	100	9		
S 6425	405136 725227	70	-16		
S 6426	405128 725158	69	-17		
S 6434	405223 725234	85	-1515	-157	-952
S 6456	405218 725311	91	-126	-119	-1101
S 6457	404803 725214	53	-161	-146	-1391
S 6458	405326 725058	61	-201	-159	
S 6459	405122 725101	45	-120	-100	
S 6513	410038 723338	70	-40		
S 6678	4040220731625	1	-123	-61	-88
S 6771	410418 722200	100	19		-120
S 6773	405734 724151	85	-9		
S 6949	405541 731940	8	-93		
S 7016	405628 732402	40	-39		
S 7123	410436 722556	40	-44		
S 7148	4048040732037	170	26	127	
S 7211	410215 723036	67	-69		
S 7218	405632 721214	20	-22		

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				LOCATED NEAR WELL	REMARKS
		TOP LEVEL	BOTTOM LEVEL	GARD-TNERS CLAY	MON GRAVEL	RARIT AQUIFER	LLOYD UNIT		
S 7267	4101150	723005	18	-25					
S 7271	404602	732415	100	-306					
S 7281	410919	721447	13	-9					26
S 7285	405831	724138	120	-52					
S 7287	405751	720922	34	-20					
S 7314	404911	732144	215	45					
S 7350	403850	730934	10	-412					
S 7352	405747	724027	75	-46					
S 7367	405005	732134	220	57					
S 7499	405620	722037	55	-53					
S 7519	404636	725936	20	-274					
S 7569	405127	723017	15	-16					
S 7570	405840	721145	70	-92					S31653
S 7650	405741	721903	120	33					S48426
S 7688	410241	722855	45	-46					
S 7701	405322	722518	22	-38					
S 7878	410024	723147	25	-32					
S 7881	405603	724804	92	-31					
S 7882	405748	723451	37	-89					
S 7908	405740	723959	68	-44					
S 7935	404853	731654	175	29					
S 8025	405712	724231	85	-45					
S 8077	405639	724220	70	-130					
S 8117	404914	731940	260	10					42
S 8120	405138	732106	220	-155					
S 8121	405134	731858	180	-147					
S 8128	404833	732430	144	-241					82
S 8133	410225	722921	57	-71					
S 8205	404848	732033	235	32					
S 8220	410058	720752	50	-14					70

S 8388	405658	723850	40	-46
S 8439	405646	730416	10	-80
S 8448	405059	731858	190	-330
S 8608	410528	722328	5	-103
S 8667	410112	722944	35	-27
S 8779	410902	721613	13	-2
S 8782	410647	732220	22	-3
S 8835	405307	723235	33	
S 8861	40473007	732605	290	44
S 8895	405802	724939	135	-22
S 8904	405401	724335	50	-45
S 8943	40464907	732152	240	-28
S 8980	405845	720824	48	-56
S 9011	405107	731643	140	-59
S 9067	40442407	732457	85	-215
S 9087	405601	730021	160	-95
S 9211	405824	723831	80	-45
S 9251	405022	732236	200	21
S 9281	405631	722448	5	-290
S 9349	404104	730022	10	-330
S 9470	405609	721814	30	-41
S 9484	405246	722635	30	-407
S 9499	405437	722728	55	-135
S 9582	404959	723750	40	-19
S 9583	405019	723720	30	-29
S 9584	405043	723715	35	-26
S 9654	405504	731842	10	-213
S 9752	404910	732317	265	41
S 9771	405045	731615	140	-11
S 9868	404809	723702	5	-312
S 9973	404706	724051	10	-265
S10024	405551	725851	130	-55
S10091	410231	722954	60	-43
S10163	410117	723155	57	-50
S10219	404551	725050	13	-32
S10238	405527	732854	105	-47
S10260	405123	732723	225	-161
S10364	405642	723444	13	-39
S10365	405925	723509	60	-82
S10384	405448	724800	55	-254

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARIT GARDINERS CLAY	MON JAMECO GREEN SAND MAGOTHY CONF AQUIFER UNIT	LLoyd AQUIFER UNIT	BED-ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM										
S10538	405732 730625	32	-49										
S10546	404816 730011	75	2										
S10632	410022 723158	25	-79										
S10641	404219 731905	19	-43										
S10689	405507 725954	135	-55										
S10724	405730 723332	22	-67										
S10729	404923 724613	62	-39										
S10733	404943 723723	10	-48										
S10760	404148 732259	35	-50										
S10766	404842 731720	130	-7										
S10830	404612 732445	110	30										
S10876	405042 723318	13	-340										
S10902	405215 731619	140	-298										
S10914	405546 723909	25	-315										
S10922	405323 722333	22	-85										
S10931	405311 722854	66	-36										
S10941	405506 730345	171	-14										
S10977	405657 723408	12	-38										
S11105	405342 732038	175	-342										
S11241	410122 723042	55	-36										
S11242	410004 723100	37	-53										
S11260	405038 724626	125	-29										
S11261	405839 723612	60	-56										
S11262	404617 732507	110	-65										
S11267	404719 732029	110	8										
S11279	4038250731521	5	-403										
S11428	4042360731323	5	-175										
S11538	4043190731453	12	-108										
S11673	404635 732631	260	62										
S11695	410148 722350	5	-70										

S11737	410330	722753	30	-58	
S11748	410553	722327	20	-47	
S11768	405156	730454	95	0	
S11803	405008	732148	172	-87	
S11810	405045	731205	35	-261	
S11891	405054	731510	70	-258	
S11929	410400	722629	35	-52	
S12015	410151	722741	20	-51	
S12079	40475007	732415	141	-304	20
S12081	405648	730749	70	-9	
S12092	405100	724409	83	-52	
S12130	405126	732736	70	-237	
S12151	410416	722435	10	-51	
S12160	405810	724241	125	-49	
S12163	404821	731856	165	-4	
S12366	405224	732643	160	-104	
S12379	40405907	732214	18	-57	
S12383	404942	731802	140	-43	
S12400	410415	722517	20	-52	
S12416	405733	730021	145	-22	
S12420	410131	723134	58	-62	
S12424	404517	730152	22	-34	
S12441	40403907	732132	3	-159	
S12457	405156	730454	95	0	
S12465	410420	721959	53	-43	
S12472	404711	730053	40	-55	
S12542	405055	732133	205	-49	
S12556	405943	723521	100	-34	
S12591	405744	721848	110	-9	
S12628	40405307	731915	5	-154	-78
S12702	404942	723723	10	-46	
S12873	40455807	731826	82	-306	
S13175	405015	732343	178	-87	
S13192	410822	722106	35	-15	
S13203	405925	721939	3	-47	
S13205	405952	722022	6	-142	
S13248	405302	731530	163	-33	
S13489	405940	723014	15	-50	
S13534	404527	731503	62	-64	-58
S13537	405954	722842	15	-13	

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARIT GARD- INERS CLAY	MON JAMECO GREEN MAGOTHY CONF SAND GRAVEL AQUIFER UNIT AQUIFER	LLoyD BED- ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM									
S13568	4055805 721906	40	-33									
S13579	4044937 732626	175	49									142
S13591	4046000 732624	170	-139									73
S13620	4044937 730603	135	-25									
S13640	4055922 723626	85	-34									
S13642	4044821 731715	90	-5									
S13712	4055244 732414	190	-46									
S13854	4038000 732034	10	-309									
S13876	4055013 732638	120	-178									
S13886	404404 730506	20	-17									
S14150	4044352 731343	11	-60									
S14250	4044835 730634	110	-27									
S14326	4044920 731427	70	-155									
S14521	4055143 732019	200	-352									
S14559	4055320 7255831	85	4									
S14560	4044733 730440	88	27									
S14579	4044954 731839	157	-397									
S14588	4044928 730534	132	-8									
S14612	405746 725635	100	-40									
S14623	410903 721520	12	-30									
S14675	4055113 732606	230	-365									
S14678	404628 724308	10	-366									
S14710	4044553 725618	30	-86									
S14750	4055559 732324	100	-35									
S14759	404816 732150	200	-211									
S14767	405452 724001	20	-195									
S14776	405459 731634	60	-36									
S14792	405454 730258	165	-288									
S14825	4045380 732622	140	-53									
S14828	4055113 732606	227	-279									

S14885	4050333	730903	110	36	-71	PRES	-104
S14904	4042210731142	3	-235				
S14907	405206	723436	170	-18			
S14908	405603	725810	137	-8			
S14921	405813	721009	50	-75			
S14940	404440732143	3	-188	-60			
S14977	405158	725258	97	-201			
S14987	405106	732246	210	-7			
S15008	4038500730812	5	-474	-110			
S15015	405738	723906	64	-70			
S15037	404639	726856	42	-60			
S15091	410256	720946	45	-124			
S15106	404245	725546	5	-1937			
S15189	405247	732355	210				
S15212	4041360731737	7	-283	-58			
S15219	405452	724000	20	-262			
S15285	404902	730112	65	1			
S15338	405015	731701	150	-20			
S15348	405415	723619	20	-29			
S15366	404917	731953	290	50			
S15427	405002	731645	140	3			
S15431	405525	732610	85	-10			
S15432	405520	732705	60	-60			
S15461	405551	732714	80	-28			
S15505	404232	732041	26	-54			
S15514	405308	731751	200	-395			
S15515	405307	731751	200	-156			
S15520	404629	725448	15	-28			
S15532	405242	730739	120	-76			
S15539	4045530730035	20	-295	-95			
S15554	405527	732636	80	-43			
S15651	405415	725901	90	-16			
S15681	404841	731350	115	-4			
S15775	404304	731635	25	-286			
S15778	405113	732608	230	-274			
S15796	410729	722108	42	-39			
S15809	404724	731650	100	-53			
S15883	405115	732659	220	-2			
S15901	404104	730022	10	-398			
S15902	410009	722708	52	-11			

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL						LOCATED NEAR WELL	REMARKS	
		TOP	BOTTOM	GARDINERS	JAMECO	MONOCLAY	GREEN SAND	MAGOOTHY AQUIFER	CONFIRMED	LLOYD ROCK		
S15914	404628	732047	85	-39								
S15923	405144	731554	140	-124								
S15949	405230	725251	80	-144								
S15950	405232	725317	75	-148								
S15951	405233	725323	70	-148								
S15962	405607	730724	84	-40								
S15977	403937	732346	4	-158								
S16070	404829	732534	220	30								
S16124	404947	730426	130	-34								
S16129	405302	731530	160	-390								
S16136	404902	730649	111	1								
S16137	405027	732503	160	-444								
S16176	404528	731505	62	-55								
S16256	404402	731930	41	-609								
S16273	403826	731040	5	-411								
S16369	405230	730306	101	-150								
S16329	405155	732139	235	-50								
S16395	4038590730753	10	-467	-105								
S16442	405809	724241	125	-38								
S16443	405629	722539	10	-40								
S16526	4047070732521	120	-181									
S16586	405615	732338	125	17								
S16601	404946	731923	180	39								
S16604	4048490731929	210	27									
S16605	404824	732635	260	3								
S16612	405336	730730	146	-97								
S16665	404628	724308	10	-485								
S16668	405913	721743	15	-131								
S16698	410345	721933	35	-22								
S16705	404331	731929	30	-28								

 S33006
 S70767
 S66136
 S60127
 S64062
 S64609
 S71083
 S20635

 -128
 76

 S47024
 S51178

 -220
 81
 220

S35446

S16714	405242	724117	260	-44		S66321
S16756	405843	723529	60	-6		
S16757	405801	723454	40	-11		
S16760	410045	723237	67	-15		
S16761	405935	723058	27	-24		
S16763	410104	723143	57	-14		
S16764	410102	723031	38	-25		
S16777	410225	722837	37	-29		
S16787	410858	721715	43	-1		
S16892	404947	724056	45	-31		
S16893	404945	724142	45	-24		
S16936	4043540732525		75	-136	-38	S19408
S17037	404952	725836	90	-65		
S17128	411043	721210	16	-45		
S17131	411111	721119	65	-31		
S17135	411053	721140	36	-20		
S17137	411038	721149	16	-26		
S17181	4043400730834		1	-313	-108	S17553
S17215	405020	723715	25	-30		S21079
S17438	405221	730329	90	-165		
S17553	405023	723715	25	-36		
S17630	404933	730603	135	-43		
S17631	403806	732019	12	-314	-68	S64609
S17668	404937	725500	50	-19		
S17689	405454	730300	165	-375	-51	S46928
S17705	404856	724341	10	-375	-104	
S177835	410035	723335	60	-41		
S17963	405753	730145	10	-510		
S18003	4042320732041		26	-645	-50	S40498
S18058	404952	732115	265	-441	30	
S18075	4047070731905		110	-517		S18821
S18075	404707	731905	110	-517	-155	
S18129	404843	725506	40	-40		
S18261	404707	731904	110	-278	-156	S18821
S18473	4050000730723		65	-595	-490	
S18480	404653	725118	32	-361	-84	
S18528	404356	725202	15	-412	-104	
S18566	404528	731505	52	-601	-133	-237
S18621	404707	731904	110	-91	-51	S71083
S18729	404600	725210	23	-332	-89	-115
						-217

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL		RARIT GARDINERS CLAY	MON JAMECO SAND	GREEN MAGOTHY CONF AQUIFER UNIT	LLOYD LUDLOW UNIT	BED-ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM									
S18795	405931 720623	10	-45									
S18822	404809 724154	15	-30									
S18848	404002 730329	15	-534	-111		PRES	-325					S42762
S19048	4043040731617	25	-710				-51					
S19057	405040 731758	150	-531			PRES						
S19123	4044430730939	20	-189	-86								
S19198	405356 732758	115	-607									S21119
S19317	4039420730501	3	-481	-114								
S19395	404907 731050	139	-28									
S19408	404953 725836	92	-74									
S19485	410406 715239	50	-113									
S19488	410340 715245	48	-115									
S19490	410338 715205	31	-132									
S19554	404235 732256	41	-64	-54								S20460
S19564	405455 730728	140	-494									S29704
S19565	404551 731043	44	-75	-66								
S19576	404448 731056	25	-65									
S19584	404808 731133	95	-62									
S19767	405506 731801	15	-13									S51519
S19884	405130 730718	80	-223									S19885
S19885	405129 730719	72	-223									
S19961	404932 724835	67	-33									
S19965	404225 731812	25	-21									
S19988	410835 721823	20	-24									
S20008	405506 722359	100	-26									
S20041	404444 732511	80	-188									S20042
S20042	404444 732511	80	-505									
S20057	404520 732241	79	-121									S20300
S20060	405647 723909	25	-325									
S20071	404455 730041	5	-41									

S20300	4045200732241	75	-157	1
S20305	4038180731117	10	-438	-121
S20315	404726725105	38	-222	-207
S20318	404733731531	110	-495	-158
S20369	4049360731525	120	-192	-85
				-20
S20431	410503722309	10	-458	S58708
S20460	404235732256	41	-53	S39535
S20479	404547731042	45	-83	S27533
S20530	405258732032	280	-435	S33970
S20560	410110720953	28	-23	
S20566	4043400731541	26	-749	
S20591	405257730459	105	-45	S43117
S20601	404839732328	155	-309	
S20633	405212724726	50	-10	73
S20635	4044020731932	41	-683	
S20689	405047731204	40	-556	S23631
S20705	404639725857	42	-58	
S20839	405713725714	110	-81	
S20900	404837725952	85	7	
S20908	405553721535	30	-32	
S20924	4038270731015	10	-475	-270
S20930	404723730608	80	-50	
S20955	4041560732123	22	-808	
S21009	4046060731209	45	-387	S31038
S21079	405221730329	90	-152	
S21080	403727731547	10	-1105	
S21091	403727731546	10	-2004	S21091
S21095	410227722327	25	-23	
S21119	405357732800	115	-658	
S21120	405446730650	120	-383	
S21121	405134732357	220	-381	
S21134	406108731742	160	-387	S38785
S21244	404304731615	23	-579	
S21247	404717725958	60	-85	S42762
S21362	4047480732255	158	-407	S62022
S21366	404357731816	45	-425	S74284
S21375	4042220731904	18	-483	
S21404	405612730055	133	-111	
S21405	405253730310	115	17	S40330
S21487	404323732225	43	-662	
			-47	

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARIT MON GREEN MAGOTHY CONF LLOYD BED-LOCATED AQUIFER UNIT AQUIFER ROCK NEAR WELL	REMARKS
		TOP	BOTTOM	GARD- INERS CLAY	JAMECO GRAVEL				
S21529	4055446 7241112	42	-193						
S21632	405451 730650	120	-400						
S21734	405519 732939	64	-389						
S21768	405050 724933	90	-43						
S21873	404840 725138	60	-40						
S21906	410419 721917	20	-30						
S21944	405037 731027	55	2						
S21945	405159 730855	123	-627						
S22001	404928 730627	89	-20						
S22015	4047500732455	160	-582						
S22048	405257 732034	290	-312						
S22169	4038140731146	5	-428						
S22171	405127 730709	120	-330						
S22278	404350732300	60	-124						
S22303	403821 731820	10	-275						
S22351	4040500732324	21	-537						
S22362	404959 731656	155	-160						
S22453	405028 730321	165	-71						
S22471	404922 731629	165	-218						
S22494	4046170731229	50	-70						
S22508	405050 730329	190	-37						
S22547	405159 730448	95	-11						
S22548	404707 731904	114	-301						
S22568	405132 730959	110	-140						
S22577	4049020730940	61	-846						
S22640	405626 730319	225	-425						
S22673	404649 730501	50	-109						
S22683	404836 730346	75	-46						
S22711	404633 730708	70	-70						
S22785	405252 724035	175	-102						

S22792	405043	725804	140	-30		
S22823	404808	731328	125	-275	-42	
S22871	404753	732443	135	40		
S22880	404009	730305	5	-555	-172	-300
S22910	4048280731140		125	-821	-122	-745
S22961	405002	724456	55	-35		
S23045	404502	731822	60	-545	-44	
S23046	404457	731824	60	-388	-45	
S23058	4043450731711		40	-177	-65	
S23059	4045270732412		105	-99	21	
S23132	404750	730219	72	-13		
S23136	405844	722150	90	-106		
S23145	405226	732317	195	-405		
S23183	4049220731228		61	-439	-200	
S23185	405606	730723	98	-445	-68	
S23186	405255	731427	160	-331	-62	
S23252	404954	731148	65	-98		
S23255	405457	730303	165	-321	-36	
S23371	405337	732022	175	-428	-342	
S23433	404841	723935	12	-309	-108	-180
S23433	404841	723935	15	-306	-103	
S23440	404943	725916	105	-60	-161	
S23445	4046590731642		110	-500		
S23455	4044190731415		30	-51	-51	
S23462	404813	731328	125	-275	-42	
S23505	405504	731936	75	-125		
S23506	405323	730957	100	-60		
S23507	405427	730924	100	-80		
S23522	404808	731913	145	-279		
S23523	404750	732150	190	-268		
S23524	405158	730300	110	-352	-338	
S23531	404806	731001	70	-92		
S23609	405319	730829	125	-359		
S23626	4043350731333		4	-522	-90	
S23631	405047	731207	40	-583	-268	
S23699	405305	732228	70	-115		
S23715	404955	731704	155	-185	-160	
S23733	405018	730123	220	29		
S23822	405759	724450	130	-119		
S23823	4043370732513		70	-337	-32	

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARIT GARDINERS CLAY	MON JAMECO GRAVEL	GREEN MAGOTHY CONF AQUIFER	LLOYD UNIT	BED-ROCK	LOCATED NEAR WELL	REMARKS	
		LEVEL	TOP	BOTTOM											
S23827	405245	725850	90	-60											S23828
S23828	405244	725850	90	-60											
S23832	404922	731628	165	-240											
S23848	4044300732113		50	-584											S25674
S23876	404935	724326	30	-70											
S23971	405831	721318	70	-29											
S23997	405050	732145	200	-505											-448
S23998	405140	732221	220	-446											-383
S23999	405018	731817	160	-544											-530
S24047	404801	731004	70	-65											
S24121	405316	725545	85	-9											
S24545	405251	731427	160	-352											S34460
S24552	403810	731220	5	-665											-229
S24663	405626	730318	230	-230											-134
S24769	404819	731603	139	-719											-699
S24772	404813	731356	120	-846											-50
S24775	405240	730705	130	-5											-766
S24846	4046390731514		90	-427											
S24848	405231	723129	50	-73											
S24875	405700	721704	55	-23											
S25036	405707	721945	91	-39											
S25257	405959	720807	40	-18											
S25260	405354	725353	90	-20											
S25399	405859	722241	70	-50											
S25511	404407	731547	40	-40											
S25617	404458	731823	64	-377											
S25674	4044310732115		50	-575											-41
S25709	410442	722203	5	-5											-40
S25776	405307	731752	200	-386											-182
S26059	404521	730637	43	-32											

S26247	4050558	732338	178	-269				
S26490	404505	731317	40	-70				
S26518	405542	725332	95	-22				
S26535	404343	731541	26	-750				
S26600	405200	730855	123	-200				
S26681	405246	732523	10	-596				
S27070	405135	732357	209	-351				
S27147	410007	721411	90	-20				
S27192	405301	731530	167	-307				
S27224	405428	725304	95	-13				
S27258	40445607	730329	26	-581				
S27259	404617	730355	55	-135				
S27261	405606	725810	137	-27				
S27440	404104	730022	5	-563				
S27533	404547	731042	45	-655				
S27739	40460307	732148	140	-785				
S27784	405337	730734	145	-174				
S27975	405037	725558	61	-20				
S28035	40464707	732442	125	-201				
S28055	405055	732002	200	-105				
S28211	404413	732518	75	-501				
S28212	40370707	732343	10	-315				
S28306	405911	720949	95	-23				
S28329	405439	730724	150	-50				
S28339	40401907	730227	15	-671				
S28383	404942	725511	55	-56				
S28406	405111	723333	30	-40				
S28408	404466	730329	25	-310				
S28503	404318	732019	30	-646				
S28530	405220	725734	85	-185				
S28564	411627	715858	12	-38				
S28693	405339	730736	147	-454				
S28756	405343	725414	110	-5				
S28767	404717	725957	60	-79				
S28809	404410	730322	15	-45				
S28819	404912	730333	125	-139				
S28880	410142	715827	125	-23				
S28928	405414	722328	38	-72				
S29034	405054	725512	140	-30				
S29277	405002	731506	115	3				

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UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL						LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOTHY CONF AQUIFER	LLOYD UNIT	BED-ROCK		
S29296	405311 722156	20	-30								
S29411	405448 730651	111	-442								S36166
S29491	4041200732245	25	-474								-75
S29492	404912 730332	116	-139								S688886
S29501	405420 724755	45	-16								
S29863	405647 725706	135	-36								
S29704	405458 730729	140	-158								-32
S29732	405337 730736	145	-420								-100
S29743	405856 720639	50	-258								-255
S29751	405442 725420	75	-33								
S29776	4047100732640	195	-640								83
S29823	404521 732252	76	-546								14
S29852	405042 731955	190	-500								-261
S29896	405457 730712	120	-340								-46
S29897	405450 730734	140	-134								-56
S29962	4048320732207	208	-467								-409
S29981	405051 724513	90	-35								
S30007	4046070732530	101	-491								49
S30008	405058 732338	185	-303								-225
S30088	405655 725902	165	-118								
S30114	403800 732034	10	-317								-133
S30118	404913 730955	58	-139								
S30193	404524 731606	65	-15								
S30207	410321 715645	125	-52								
S30208	410327 715652	135	-40								
S30230	405124 723537	40	-1584								-135
S30234	404755 731312	112	-78								-68
S30235	4048060732613	280	-60								210
S30271	405548 724126	26	-1260								-190
S30296	405806 730723	25	-55								-734
											-902

S30324	405002	725348	50	-73			
S30326	405047	724627	160	-65			
S30343	4046310730357	60	-290		-104		
S30421	4047180732453	125	-145		75		
S30506	4045150732255	75	-546		1		
S30550	4039230730611	6	-501	-110	-134	-334	
S30554	405732	724912	170	-1			
S30724	405731	721315	30	-38			
S30729	405417	731121	100	-249			
S30739	404834	724532	25	-25			
S30925	404849	724948	30	-60			
S30931	405542	731931	10	-75			
S30977	410035	720838	20	-28			
S31023	4045270732446	100	-284		23		
S31037	405411	722330	36	-1179	-154	-922	-1138
S31038	404156	732123	19	-509			
S31039	405253	732635	82	-708	-76	-318	-443
S31104	404700	731641	110	-548		-190	-688
S31112	404245	725546	7	-458		-135	-233
S31113	4040160730237	7	-501	-119		-160	-345
S31199	405543	722214	65	-33			
S31216	405305	723703	115	-24			
S31269	405512	730105	138	-199	-94		
S31270	405357	730212	137	-231			
S31471	405326	722635	38	-87			
S31488	410153	720007	150	-34			
S31494	405653	722354	15	-65			
S31562	405714	721917	100	1			
S31624	4047550731316	110	-329		-61		
S31633	410547	722029	42	-22			
S31636	405233	723130	52	-68			
S31653	405838	721143	74	-392			
S31711	405143	731100	125	-480	-260		
S31734	405450	730303	163	-958	-141		
S31735	410155	715835	173	-352	-49	-619	-716
S31737	405531	722536	12	-28			
S31787	410205	720955	30	-39			
S31814	405533	731855	5	-104			
S31815	405531	731842	5	-143			
S31861	405937	720321	10	-20			

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL						LOCATED NEAR WELL	REMARKS	
		TOP	BOTTOM	GARDINERS	MONROE	JAMECO	GREEN	MAGOOTHY	CONF.	LLOYD	AQUIFER	
S31867	404845 730401	100	-88									
S31913	404617 730355	54	-109									
S31925	405645 724920	100	-22									
S31976	405936 723542	45	-67									
S32014	404320 730535	5	-41									
S32015	405413 732049	150	-658									
S32125	405738 725159	50	-26									
S32180	405511 730107	132	-209									
S32204	405848 721252	95	-33									
S32219	403843 730917	10	-380									
S32309	405711 730828	69	-39									
S32325	405356 730210	142	-212									
S32326	405357 730211	135	-25									
S32359	404908 724731	65	-1252									
S32390	410056 723026	36	-514									
S32412	4047360731532	110	-790									
S32466	405550 724510	80	-83									
S32501	4040470732523	28	-606									
S32551	405031 730321	170	-75									
S32552	405030 730321	170	-75									
S32553	4102220 720846	10	-38									
S32555	410012 721051	30	-38									
S32575	405341 725313	80	-20									
S32821	405615 730516	75	-527									
S32841	4045340732108	61	-587									
S32842	403820 731735	10	-298									
S32843	410316 715547	12	-38									
S32854	410353 715449	30	-38									
S32883	405849 720900	50	-29									
S32885	405442 731908	95	-176									

S32895	405452	730257	165	-680		-49	
S32913	405753	724855	90	6			S46928
S32988	410515	722200	32	-58			S52084
S33005	404318073201	8	33	-648		-40	
S33006	405143	731554	147	-357		-75	
S33060	405157	730740	91	-330			
S33073	405725	723628	45	-655		-310	
S33200	410304	722207	17	-15			
S33203	405149	730756	95	-534			S39187
S33204	405149	730752	95	-422			S39187
S33205	405150	730748	93	-350			
S33206	405154	730801	95	-492			
S33230	404910073264	8	240	-120			
S33271	410255	715428	18	-22			
S33343	410209	721905	16	-20			
S33379	404932073055	9	134	-1446		-310	S64609
S33380	404932	730559	134	-716		-299	S64609
S33381	405313	730810	129	-678		-433	
S33382	410458	722102	35	-28			
S33399	405351	730505	140	-6			
S33428	410109	721032	40	-28			
S33430	405925	720900	100	-29			
S33490	404601	725447	15	-35			
S33497	405251	730228	100	19			
S33500	405340	730736	148	-403		-98	
S33595	404800	730805	92	-21			
S33598	410442	721950	48	-31			
S33661	410154	721236	42	-40			
S33684	405313	732206	10	-361			
S33775	410337	722644	25	-335		-205	
S33825	404740	725657	70	-110			
S33826	404739	725656	70	-93			S33826
S33848	405939	721849	7	-23			
S33922	405718	721904	115	-700			
S33970	405256	732033	307	-301		-215	
S33991	404511	731120	35	-668		-69	
S34007	405512	730105	136	-209		-93	
S34015	405319	732337	101	-509		-98	
S34016	405156	730451	95	-617		-383	S48719
S34021	404703073231	3	260	-450		-335	S35494
				-160			

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND AQUIFER	LLOYD AQUIFER		
S34022	404657	732104	220	-340					
S34032	404808	731912	150	-291					
S34058	405208	722355	10	-27					
S34063	4046350732140	200	-536					58	
S34064	404635 732140	200	-432					39	
S34100	4043500732202	53	-658					-72	
S34156	404953 724808	80	-20						
S34215	404913 730829	95	-3						
S34272	405713 724713	130	-871					-150	
S34293	410056 721227	50	-38						
S34300	405615 730516	72	-378					-74	
S34301	405612 730516	98	-439					-82	
S34354	405425 724433	30	-110						
S34390	410003 721117	5	-45						
S34460	405253 731427	153	-446					-75	
S34477	405839 725954	150	-30						
S34629	404901 725015	17	-133						
S34632	405440 721908	17	-31						
S34651	405147 730740	94	-323						
S34652	405148 730755	94	-8						
S34653	405149 730801	100	-600						
S34655	405624 723908	25	-240						
S34674	405415 722639	15	-45						
S34733	405144 731057	126	-295						
S34743	405040 724148	65	-1161					-105	
S34839	406009 724507	120							
S34851	405054 731002	70	-14						
S34892	405519 725749	122	-16						
S34893	405517725749	125	-719					-555	
S34894	405518 725749	123	-622					-547	

S34941	405156	723306	45	-25		
S35005	404459	731237	33	-74		
S35007	404918	732532	232	-469	-148	-430
S35036	405912	721424	90	-9		
S35063	4044270730732	13	-697	-117		
S35110	405448	724801	55	-381		
S35122	405420	722640	10	-42		
S35136	404918	730722	95	15		
S35270	405409	730614	148	8		
S35365	405330	722140	24	-45		
S35399	404828	731454	140	-26		
S35446	405339	730736	149	-251	-89	
S35469	404810	724656	25	-43		
S35494	405156	730451	95	-346		
S35581	405642	721547	45	-24	-335	
S35669	4048040731751	70	-48		-38	
S35670	4042070732458	45	-127	-33	-53	
S35679	405131	730959	120	-116		
S35788	405954	722627	18	-29		
S35939	405141	731907	171	-362	-299	
S36940	405157	730107	145	-153		
S36946	405428	722025	12	-28		
S36007	405611	721640	40	-19		
S36042	405614	722351	55	-39		
S36168	405448	730651	107	-326	-45	
S36185	405434	731943	40	-280		
S36192	405734	725144	22	-284		
S36318	405328	722441	35	-58		
S36440	410500	722048	35	-63		
S36448	405627	725407	132	-272		
S36459	405409	730814	148	-375		
S36460	4045360731635	76	-635	-49		
S36531	405030	723518	30	-31		
S36680	405819	721845	30	-110		
S36711	405333	725829	81	-144	-83	
S36714	404458	731824	63	-291	-42	
S36791	405046	731615	140	-534	-89	
S36856	410500	722048	32	-22		
S36886	410050	721438	7	-34		
S36981	404817	730829	100	-25		

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARITY	LOCATED NEAR WELL	REMARKS
		LEVEL	TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND AQUIFER	LLOYD UNIT AQUIFER	BED-ROCK	
S36965	405639 721811	52	-110							
S37140	404510 731123	35	-295	-69				-86		S42827
S37141	404755 731314	112	-316					-66		
S37144	4047530730244	76	-126	-104				-114		
S37145	4048040730512	98	-112	-96				-102		S54305
S37174	405159 730856	123	-186					-118		
S37276	404918 731330	40	-360					-98		
S37301	405409 730661	148	-167					-37		
S37351	405141 731908	171	-492					-293	-461	S53747
S37494	404717 725956	60	-562					-100		S62022
S37681	4042320732256	42	-541	-52				-68		
S37847	404932 730663	136	-318					-308		S64609
S37991	405456 725327	102	-39							
S38035	4047230732453	132	-318					82		
S38192	4045270731503	66	-539	-60				-74		S71083
S38194	405654 725962	157	-618					-600		
S38320	404756 730255	75	-98							S42761
S38321	404756 730255	63	-240					-133		S42761
S38491	404922 731227	61	-342					-209		
S38595	405257 730501	100	-500					-305		S43117
S38784	405256 730456	105	-498					-300		S43117
S38785	405136 732357	202	-499							
S38916	405418 730649	227	-618					-27	-563	S40980
S39184	405147 730804	93	-607							S39187
S39185	405147 730805	93	-526							S39187
S39186	405147 730803	93	-590							S39187
S39187	405147 730804	95	-603							
S39333	405208 731314	64	-594					-422		S40711
S39347	405054 730509	128	-48							S42760
S39518	4051180731238	76	-649					PRES	-594	S42473

S39531	404614	731230	53	-236	-70
S39535	403819	731117	5	-456	-100
S39536	405345	732038	173	-442	-140
S39709	404556	732522	85	-620	3
S40057	4050160730903	110	-513	-154	S42227
S40161	405335	725629	80	-58	S49606
S40161	405335	725629	80	-58	S46830
S40330	404324	732222	43	-294	-39
S40331	405221	730212	87	-607	S41050
S40333	405236	731709	110	-415	
S40407	405636	723448	10	-130	
S40497	404606	731746	74	-210	-64
S40498	404230	732041	24	-724	-60
S40709	405223	730219	90	-395	
S40710	405207	731314	70	-393	S40711
S40711	405209	731314	70	-203	
S40818	4046100730537	55	-699	-101	-105
S40837	405510	730453	195	-615	-81
S40838	405510	730453	195	-99	S57980
S40849	405510	730634	81	20	S57980
S40850	405555	730601	61	6	
S40851	405744	725719	32	1	
S40852	405656	725643	115	18	
S40853	405608	725624	100	29	
S40854	405442	725630	108	21	
S409980	405418	730649	225	-353	-1
S40981	404820	730735	100	-594	-116
S41050	405222	730213	89	18	
S41341	404807	725907	73	-630	S71785
S41342	4050210730624	130	-533	-384	
S41343	405217	730116	110	-540	
S41344	4049190731428	79	-614	-186	S44774
S41345	405249	731928	237	-570	-47
S41358	403817	731633	10	-361	S61937
S41513	4051200730824	108	-611	-149	
S420053	405032	731407	50	-663	-56
S42054	4050430731229	40	-683	-240	
S42225	405015	732352	110	-680	
S42226	405015	730902	110	-160	
S42227	405016	730903	110	-143	S42227

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARIT MON GREEN MAGOTHY CONF LLoyd AQUIFER UNIT AQUIFER	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARD- INERS CLAY	JAMECO GRAVEL	LLoyd SAND	BED- ROCK			
S42270	405119 731237	76	-573							
S42473	405119 731237	76	-573							
S42504	405215 730115	110	-113							
S42505	405213 720113	110	-113							
S42760	405054 730509	130	-43							
S42761	4047560730255	75	-258							
S42762	4043050731614	26	-688							
S42827	404511 731123	35	-628							
S43001	405113 732609	230	-360							
S43010	404804 724838	20	-680							
S43088	4046400731521	90	-812							
S43101	4051400730240	40	-663							
S43117	405256 730456	102	-450							
S43516	4046180730356	55	-748							
S43808	404323 732534	86	7							
S43810	404124 732416	30	-46							
S43811	404530 732411	102	12							
S43813	404158 732258	35	-43							
S43814	404455 732150	60	10							
S43816	404237 732206	40	-40							
S43817	404618 732050	70	14							
S43819	404250 732023	30	-48							
S43820	404649 731840	110	12							
S43822	404302 731855	20	-54							
S44032	4051470730649	118	-635							
S44137	4044320731513	39	-681							
S44186	4050040730227	165	-508							
S44378	405322 732114	27	-440							
S44467	405122 725407	105	-608							
S44640	405710 725713	155	-50							

S44774	404920	731428	79	-214		
S44775	405407	730009	150	-605		
S44914	405254	732142	30	5		
S44918	404812	730412	85			
S45053	405330	732424	185	60		
S45207	405132	731814	165	19		
S45208	405005	732337	150	13		
S45210	404943	731745	125	16		
S45212	405356	731920	120	6		
S45220	40430807	730852	10	-714		
S45346	405341	730032	126	36		
S45347	40472607	731626	130	-513		
S45348	404729	731628	130	-520		
S45402	405259	731622	180	10		
S45446	404400	731544	38	-3		
S45447	404606	730500	52	-30		
S45594	404920	731509	105	20		
S45610	405322	732114	15	-298		
S45637	404608	730809	13	-69		
S45638	404804	732037	170	-555		
S45639	404804	732049	170	-570		
S45717	404618	731645	93	18		
S45719	404635	731016	26	-56		
S45720	404716	731316	90	9		
S45722	404516	731228	37	-44		
S45724	405253	725419	84	32		
S45808	405201	725442	93	-614		
S45838	405213	725800	92	35		
S45839	404030731312	40	-686			
S45935	404851	731851	285	-444		
S46185	405521	731005	15	-466		
S46235	404432	731513	39	-674		
S46281	405237	732595	34	-17		
S46283	404823	732118	275	36		
S46284	404848	730734	110	2		
S46286	404636	731109	120	13		
S46400	405002	730226	180	-93		
S46509	404317	730859	15	-300		
S46548	405715	725916	71	-13		
S46549	405624	730221	97	-4		

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARIT MON GREEN MAGOTHY CONF LLOYD UNIT AQUIFER	BED-ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL						
S46712	404803 724840	20	-80								
S46713	404804 724941	20	-424								
S46830	404606 731746	76	-579								
S46871	405041 732515	196	-640								
S46911	404920 724845	41	7								
S46912	404919 724845	42	10								
S46928	405455 730258	166	-488								
S46963	405226 730957	147	14								
S46964	405225 731522	123	9								
S46965	405230 731644	166	14								
S46966	404952 724705	89	3								
S47002	405300 723052	90	-73								
S47024	404628 724308	10	-367								
S47100	405140 730057	180	41								
S47157	404933 731342	105	80								
S47218	405335 725629	71	-632								
S47219	405407 730011	144	-64								
S47222	404200 731636	75	47								
S47223	404351 730541	55	25								
S47224	404817 726325	20	-13								
S47225	405218 725611	51	20								
S47227	405240 724914	40	-60								
S47228	405306 724827	40	-61								
S47231	405541 723753	40									
S47233	410348 722729	11	-40								
S47234	410213 722327	7	-20								
S47235	410037 721451	5	-17								
S47236	410156 721336	35	-25								
S47281	405349 724415	140	-135								
S47282	405349 724415	140	-143								

S47310	405407	730011	135	-9				
S47428	405704	721659	63	-8				
S47436	405124	725408	105	-91				
S47437	405124	725408	105	-74				
S47438	405124	725408	105	-164				-103
S47439	404739	725627	71	-636				
S47453	404804	730513	100	-343				
S47672	40481007	731132	100	-634				
S47673	405142	731058	109	-170				
S47675	405111	730658	80	-10				
S47698	405307	730609	133	29				
S47711	40411907	732219	25	-196				
S47718	404941	730654	68	17				
S47741	405211	732507	70	-489				
S47743	404642	730058	35	-65				
S47745	405417	725727	62	30				
S47746	404847	725713	90	6				
S47747	404740	725452	31	-4				
S47748	405638	725147	110	74				
S47760	405004	725154	95					
S47752	404607	725947	23	-77				
S47765	405136	724645	63	5				
S47766	404922	725950	89	20				
S47767	405008	730255	160	22				
S47768	404852	730504	121	19				
S47888	404204	732420	43	-468	PRES			
S47887	404046	732521	26	-622	-56			
S47945	405648	725551	143	1				
S47973	405604	730843	94	4				
S47974	405532	730257	149	-1				
S47975	405050	725953	153	24				
S47976	405805	725915	150	12				
S47977	404711	725150	38	-17				
S48014	405203	730855	124	-219				
S48193	404515	732255	80	-454				
S48422	40494807	730848	95	-640				
S48423	405609	730213	133	-554				
S48424	404904	725700	102	-708				
S48425	405808	722027	35	-9				
S48426	405740	721900	117	-4				

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WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL		GARDINERS CLAY	JAMECO GRAVEL	MON GREEN SAND	MAGOOTHY UNIT AQUIFER	LLYD CONF	RARIT UNIT AQUIFER	BED-ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM											
S48427	405618	721805	38	-14										
S48429	405807	721210	50	-16										
S48430	405501	722155	22	-21										
S48432	405606	722357	52	-11										
S48433	405644	722201	78	-57										
S48434	405227	723523	170	-17										
S48435	405051	723531	170	111										
S48436	405229	724156	112	7										
S48437	405831	721712	65	-7										
S48438	405844	721916	114	32										
S48439	405325	722627	31	-20										
S48441	405349	722348	47	-14										
S48442	404941	724148	44	-11										
S48517	405838	721540	36	-35										
S48518	405650	721452	37	-34										
S48519	410243	715601	80	-2										
S48520	405918	721321	50	-12										
S48521	405940	721647	48	-27										
S48522	405858	720624	20	-72										
S48577	410149	715832	180	71										
S48578	405928	721104	90	58										
S48579	410316	715355	28	-38										
S48580	410124	721032	40	-6										
S48581	405808	723222	60	-16										
S48582	405225	723701	80	-25										
S48583	405139	723850	87	-52										
S48651	405316	730416	100	36										
S48719	405319	732336	101	-248										
S48759	404641	730054	28	-7										
S48946	405121	724906	40	-5										

S48958	405259	730103	100	20		
S49018	404739	725627	71	-445		-116
S49439	405353	731822	120	-587		
S49477	405006	724900	70	-209		-110
S49542	404206	732458	45	-515		-53
S49543	405410	730101	125	-581		
S49606	405335	725629	75	-628		
S50222	405738	725420	100	-112		
S50399	405723	723754	48	-298		
S50502	404937	730639	85	49		
S50546	404432	731513	39	-629	-42	-71
S50630	4044260730733		20	-223	-92	-105
S50970	405305	723230	90	-118		
S50971	405456	730208	146	37		
S51169	410349	722222	35	-19		
S51170	410311	722155	10	-33		
S51171	410410	722147	27	-26		
S51173	410510	722123	45	-4		
S51174	410437	722056	45	-16		
S51175	410437	722501	39	-9		
S51177	410316	721921	18	-9		
S51178	410344	721932	28	-19		
S51179	410424	721928	18	-37		
S51180	410452	722002	4	-35		
S51181	410534	721946	49	-13		
S51182	410602	721958	61	-3		
S51183	410334	721727	41	2		
S51184	410147	721841	18	-14		
S51185	410132	721846	10	-23		
S51186	410047	721847	22	-20		
S51214	404210	732502	45	-350	-38	-53
S51266	405412	730057	124	-469		
S51274	410253	715708	20	-35		
S51275	410212	715744	124	-54		
S51322	405717	723748	33	-167		
S51336	405808	724213	120	-80		
S51461	404119	725935	5	-462	-119	-150
S51519	404808	731133	100	-308		-311
S51566	405716	724133	74	-15		-145
S51567	405653	724226	81	-11		

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL- IDENT- IFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				RARIT CONF	LLYD UNIT	BED- ROCK	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARD- INERS CLAY	JAMECO MON GREEN SAND GRAVEL	MAGOOTHY AQUIFER						
S51568	405808	723854	65	-5								
S51571	405805	724037	86	-22								
S51573	405512	723952	25	-65								S52449
S51575	405544	724118	37	3								
S51576	405559	724252	60	-9								S73357
S51577	405630	724420	80	-15								
S51578	405721	724537	85	-41								
S51579	405542	724630	78	-9								
S51580	405714	724709	80	-55								
S51581	405722	723420	32	-13								
S51582	405853	723539	62	-22								
S51583	405500	724952	68	17								
S51584	405757	724918	105	-37								
S51586	405642	724919	103	3								
S51587	405809	723709	61	-19								
S51588	405634	723805	38	-22								
S51589	405704	723614	31	-13								
S51591	405418	724706	35	5								
S51592	405349	724941	56	14								
S51609	4048200730734		99	-630								-135
S51626	405229	725925	83	42								
S51673	404225	731930	25	-753								-59
S51700	404954	725952	93	38								
S51828	405745	724557	85	-64								
S51953	405607	730213	133	-183								
S52050	410400	722020	44	-304								-297
S52084	410516	722009	29	-45								
S52162	404357	725157	8	-1687								
S52236	4045040732219		80	-18								-18
S52383	405542	724453	63	-1								

S52434	405426	731216	15	-58	
S52449	405512	723952	58	17	
S52451	405407	730011	133	-50	
S52450	405354	730212	137	-417	
S52886	405513	725054	45	-12	
S52943	404558	725210	23	-287	-115
S52944	404905	725655	102	-102	-217
S53274	40475807	731227	109	-691	S65766
S53291	405002	730226	180	-85	
S53322	410057	723155	53	-47	
S53323	410702	722216	30	-22	
S53324	410104	723033	42	-20	
S53325	4106007	723319	41	-27	
S53326	410229	722957	60	-32	
S53327	410622	722936	24	-20	
S53328	410234	722436	20	-21	
S53329	410140	722816	30	-41	
S53330	410706	722032	15	-37	
S53331	410753	722055	47	-23	
S53332	405843	723243	25	-20	
S53333	405924	723423	51	-23	
S53334	405959	723039	32	-21	
S53335	410304	722627	16	-21	
S53336	410017	723155	18	-24	
S53337	410906	721713	20	-32	
S53338	410412	722613	39	-26	
S53339	40472207	730305	50	-748	-122
S53360	405032	731628	141	-562	-140
S53361	405133	731559	148	-373	-88
S53497	404950	730850	90	-83	-75
S53498	404950	730850	90	-631	S53498
S53522	405230	724300	167	-121	
S53593	405124	723536	47	-114	
S53747	405140	731910	171	-282	
S53851	405230	724300	167	-124	
S54099	40502907	730321	170	-533	S54473
S54155	40432607	731735	38	-683	-97
S54162	405359	731828	151	-392	
S54305	404805	730515	100	-213	-96
S54308	404759	731225	109	-688	-106

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL		RARITY	LOCATED NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS CLAY	JAMECO GRAVEL			
S54377	403936 730525	5	-625		PRES	-329		
S54473	405030 730321	170	-142			-130		
S54478	405906 723528	65	-502			-214		
S54479	405857 723538	65	-402			-214		S55076
S54568	404210 732502	45	-378	-38		-54		
S54731	403822 731550	8	-742	PRES	PRES	-74		
S54957	4046180731233	50	-328			-158		S66825
S55028	405332 722420	50	-165					
S55076	405856 723540	68	-275					
S55094	405122 732327	185	5					
S55502	405624 730221	115	-508					
S55733	404326 731741	38	-195			-97		
S56133	405434 731942	70	-263					
S56423	4044180731718	50	-750			-57		S72917
S56508	4045420730133	6	-703	-116		-135	-162	S60486
S56674	4044950 730015	107	-72					
S56930	405935 723548	35	-1069			-285		S63256
S57008	4046580731642	111	-524			-160		
S57354	405126 732737	50	-207					
S57357	410249 715545	32	-111					
S57486	405548 730053	131	44					
S57666	404604 732458	105	-165					
S57691	405231 730113	81	34					
S57723	404522 730450	38	-769	PRES		-115		S60812
S57748	405520 732939	82	-336					
S57979	405814 730515	100	-482			-55		
S57980	405510 730452	187	-575			-98		
S58708	4049360731525	132	-291			-16		
S58755	405052 730205	240	-12					
S58761	405342 730307	130	-593					

S58921	410040	720025	48	-27
S58922	410356	715442	48	-14
S58923	410401	715702	57	-19
S58924	405934	720932	110	-29
S58925	405948	721240	72	-20
S58926	405556	722512	5	-38
S58927	405608	722307	189	-14
S58928	405737	722158	190	-20
S58929	405816	721628	187	-16
S58930	405827	721905	184	
S58961	405831	721639	131	
S59012	405040	730134	240	-19
S59073	405045	730206	240	-10
S59259	405243	730704	142	42
S59347	404419	731715	51	-412
S59711	410123	721303	65	-329
S59719	405323	725213	63	-87
S59744	404722	730305	80	-221
S59793	405615	721823	34	-546
S59794	405208	722418	8	-145
S59795	410121	721907	15	-115
S59992	405642	722406	24	-268
S60123	405559	721459	12	-318
S60124	405922	720634	27	-168
S60125	410330	715638	87	-228
S60126	410239	720915	23	-158
S60127	4049470	730426	132	-421
S60177	405857	722137	99	-741
S60264	405040	720634	245	4
S60305	405048	730147	245	-46
S60486	404542	730133	6	-357
S60775	405223	725202	63	-77
S60812	4045240	730448	38	-450
S60897	410202	715629	78	-64
S60996	403820	731805	10	-295
S61015	410444	722605	40	-103
S61124	410109	720103	58	-352
S61160	404936	723145	10	-1025
S61356	404804	732049	170	-582
S61664	4044150	731140	28	-735
			-66	-85

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,148 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL				PARIT	MON	GREEN MAGOTHY CONF	LLOYD	BED-ROCK	NEAR WELL	REMARKS
		TOP	BOTTOM	GARDINERS	JAMECO	GRANITE	SAND							
S61910	405612	730215	133	-182										
S61937	405249	731928	237	-357										
S62022	404717	725956	60	-253										
S62101	405801	721804	74	-212										-134
S62102	405918	720825	50	-130										
S62240	405147	730848	118	-534										-136
S62404	405033	725600	55	-10										
S62405	405740	730645	38	-17										
S62406	405700	730803	42	-3										
S62407	405804	730800	40	-5										
S62855	405919	721705	85	-86										
S63205	404202	732427	40	-377										-50
S63256	404950	730015	107	-65										
S63311	4050590730507	130	-672											-56
S63385	405147	730811	100	-735										-715
S63426	404638	732511	120	-175										
S63618	404416	731137	20	-533										-92
S63794	405154	732546	170	-486										
S63966	405053	731509	79	-574										-36
S63987	404948	725917	110	-694										-130
S64023	405643	725859	160	-675										-603
S64062	405302	731534	169	-470										-228
S64099	404932	730608	143	-230										
S64847	404505	731320	40	-594										-114
S64927	405306	732331	95	-526										
S64928	404651	731203	85	-877										-71
S65196	4045290731719	69	-55	-39										-48
S65290	405643	725859	165	-629										
S65321	405243	724117	259	-45										
S65340	404636	730709	70	-734										-282

S65505	4043352	732158	54	-596	PRES	-132
S65681	405549	725936	144	34		-110
S65766	404759	731228	100	-696		
S65855	405351	725351	78	46		
S65856	405424	725456	80	17		
S65857	405429	725548	79	-2		
S65859	405453	725801	92	31		
S65860	405503	725928	135	28		
S66132	4046050	732417	100	-40	40	
S66133	4043300	732441	63	-98	-33	
S66134	4042350	732411	50	-100		-44
S66135	4041240	732415	30	-138	-60	-63
S66136	4039350	732350	5	-139	-63	-118
S66137	4046530	732121	160	17	63	
S66138	4044300	732156	60	-90	-30	-44
S66139	4043320	732122	45	-107		-41
S66140	4042050	732100	24	-88	-54	-51
S66141	4040580	732025	5	-128	-54	-59
S66142	4048150	731632	150	-63	-21	
S66143	4045400	731754	70	-115	-36	-45
S66144	4044480	731641	55	-88	-55	-63
S66145	4043350	731712	40	-135	-60	-60
S66146	4042010	731638	10	-133	-65	
S66147	4042510	730959	10	-174	-89	-145
S66148	4046140	731336	66	-87	-53	
S66149	4045240	731234	40	-143		-74
S66150	4044300	731233	25	-138	-59	-78
S66151	4043080	731318	5	-145	-70	-100
S66152	4048060	731219	115	-78	-48	
S66153	4046450	731053	50	-113	-68	
S66154	4045480	731010	30	-123	-79	-92
S66155	4044470	731041	20	-135	-81	-98
S66156	4043340	730955	15	-158	-95	-125
S66183	404722	730305	71	-472	-139	-159
S66366	405158	732548	170	-309		
S66496	405058	730509	127	-666		-78
S66506	405245	725737	83	20		
S66507	405345	725911	100	24		
S66510	405350	730316	138	31		
S66511	405644	730612	105	-17		

UPPER SURFACE ALTITUDE OF MAJOR HYDROGEOLOGIC UNITS AT 3,146 WELLS ON LONG ISLAND, NEW YORK

WELL IDENTIFICATION NUMBER	LAT-LONG	ALTITUDE OF WELL, IN FEET ABOVE OR BELOW SEA LEVEL		HYDROGEOLOGIC UNIT PENETRATED AND ALTITUDE OF UNIT SURFACE, IN FEET ABOVE OR BELOW SEA LEVEL		GARDINERS	JAMECO	MONSANTO	GREEN	MAGOOTHY	CONF.	LLOYD	BED-ROCK	NEAR WELL	REMARKS	
		TOP	BOTTOM	CLAY	GRAVEL											
S86556	4043080732431	50	-703												-48	
S86733	405814721008	45	-562												-505	
S66823	405623730052	160	-486													
S86825	405333722417	50	-335												-162	
S66880	405031722850	5	-399												-239	
S67074	4046320730706	70	-762												-274	
S67081	4038010731230	4	-121												-101	20FT
S67082	4037510731330	12	-222												-100	20FT
S67083	4037220731659	12	-113												-93	-50
S67084	4038250731823	9	-196												-88	20FT
S67085	4038130732007	7	-115												-147	-46
S67086	4037390732201	10	-115												-74	
S67087	4036570732421	10	-195												-78	
S67088	4036400732527	10	-215												-60	
S67197	4046520731203	64	-699												-74	
S67564	405255730443	103	18												-124	
S67974	404552725617	30	-760												-130	
S68854	405454725903	137	-725												-614	
S68854	405454725803	135	-716												-591	
S68866	404912730333	125	-149												-69	
S69385	405431730736	145	-195												-5	
S70261	410418715412	70	-358												-166	
S70319	404916725820	84	-678												-175	
S70334	405109731036	55	-648												-119	
S70458	404050732326	46	-715												-168	
S70488	405158730448	95	-358												-58	
S70767	405607730724	92	-491												76	
S71083	404528731507	64	-736												-285	
S71533	405253732634	88	-295												-168	
S71785	404807725908	72	-328												-168	

S71891	4055000	723345	150	-421	-164
S72580	404801	732431	150	-505	90
S72812	404804	725540	35	-175	-120
S72813	404732	725543	65	-183	-122
S72814	404653	725522	55	-166	-117
ALL U.P.					
S72917	404419	731716	50	-462	-70
S73063	404637	731409	60	-845	-80
S73270	405641	724310	70	-235	-133
S73341	404814	730956	65	-761	-295
S73357	405559	724252	60	-275	
S73370	405412	722520	64	-376	-186
S73432	405650	724306	65	-240	-117
S73508	405627	724240	60	-365	-345
S73990	405616	721823	34	-511	-176
S73993	405642	722400	24	-214	
S73994	405600	721500	12	-291	-153
S73998	405858	722136	99	-704	-276
S74284	404750	732253	155	-651	107
S74573	405102	732524	251	-401	-597
S74585	404849	732612	365	-488	95
S75034	404433	732449	80	-750	-75
S75454	404859	731940	225	-630	-665
S76016	404530	731811	65	-792	21
S76673	404942	731755	128	-614	-620
S77010	404749	730845	55	-804	-755
S77379	405845	720824	43	-311	-45
S77436	405317	723317	20	-1127	-249
S77700	404351	730541	20	-389	-591
S77842	404640	730800	60	-449	-513
LLYD>-1087					
S77379	405845	720824	43	-311	-167
S77436	405317	723317	20	-1127	-120
S77700	404351	730541	20	-389	-970
S77842	404640	730800	60	-449	-220
				-148	-402